

STORIES OF TONALITY  
IN THE AGE OF  
FRANÇOIS-JOSEPH FÉTIS

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THOMAS CHRISTENSEN

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For Clara, Edward, and Katharine  
*Mes muses trois*



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## PROLOGUE

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Not so long ago, it was common to hear dire pronouncements about the imminent demise of musical tonality. The musical citizens who made those prognostications—composers, performers, critics, and academics alike—would often point to a period around the turn of the nineteenth century as the time that the venerable lineage of tonal music in the West slowly but surely began devolving into a radically different and unrecognizable language of atonality. Harmonic tonality, it seemed, was a historically contingent language whose time was passing. For some, this was cause for celebration, or at least a resigned acceptance of the reality and necessity of musical change. We might well nominate Anton Webern as a spokesperson for this group when he famously declared in a public lecture from 1933 that tonality was “in its last throes” and for all practical purposes “dead” for any serious composer.<sup>1</sup> It was a sentiment that continued to be voiced over the following decades. As late as 1979, the composer Charles Wuorinen sniffed that “while the tonal system, in an atrophied or vestigial form, is still used today in popular and commercial music, and even occasionally in the works of backward-looking serious composers, it is no longer employed by serious composers of the mainstream. It has been replaced or succeeded by the 12-tone system.”<sup>2</sup>

For others, though, the waning of harmonic tonality portended a profound cultural loss in musical communication and meaning. No one expressed this sentiment more poignantly than Leonard Bernstein, who in his final Norton Lecture, delivered at Harvard University in 1973, elegized tonality as a natural, universal language of music in whose revitalization lay the only hope of music regaining its potential for real emotional affect. The errant path toward atonality and serialism followed by the academic composers after Schoenberg (and later the serial Stravinsky) were like the “chil-

dren of Hamelin following their Pied Piper, right into the Schoenbergian sea."<sup>3</sup>

Of course it all proved a false alarm. Tonality did not perish in the twentieth century. It turned out, on the contrary, to be surprisingly resilient. Many composers continued to write in idioms that were heard as largely tonal in orientation (sometimes dubbed *neotonal* or the *new tonality—vestigial* in the words of Wuorinen).<sup>4</sup> And the expected onslaught of serialism never materialized. Bernstein foresaw almost as much when he declared in that same 1973 lecture that serialism might someday be viewed as an “evolutionary mutation” in the history of Western music. When we now turn on our radios or iPods, go to the movies, attend a concert, or walk into a restaurant, the sounds of tonal music still fill our ears.

What is more, in these very same media and venues we can hear music of popular genres from around the world that seem also to be infiltrated by the familiar diatonic melodies, rhythms, and chordal patterns of Western tonal music even if it is often blended with indigenous performance practices. Tonality in the early twenty-first century seems to act like a resistant virile bacterium that evolves into ever-differing strains, infecting countless world idioms from Asian K-pop to African hymnody, from Bollywood film scores to iPhone ring tones.

Of course all this begs the question of just what we mean by tonality. One need not be a professional music theorist to recognize that the tonal language of a composer such as Phillip Glass or Oswald Golijov is hardly the same as what one hears in a quartet by Mozart or a symphony of Rachmaninoff (not to mention in those K-pop songs or Bollywood film scores). Then again, it is not that idioms of nontonal music don't exist. A good deal of contemporary art music would be difficult to accommodate by even the most generously capacious definition of tonality; and there are still many types of world music that seem to have resisted colonization by Western tonality. Still, for a language that has more than once been read its obituary, tonality—however defined—seems to have lived on in quite good health, thank you very much. It is no wonder, then, that among the community of academic music theorists at the beginning of the twenty-first century, there seems to be a new fluorescence of interest in theories of tonality.<sup>5</sup>

But the twentieth century was not the only time when musicians worried greatly about the nature and health of tonality. We need only look back to the middle of the nineteenth century to find some surprisingly similar anxieties expressed by musicians. Indeed, from the moment the notion was first theorized by the Belgian musicologist François-Joseph Fétis (1784–1871),

tonality—*tonalité*—began to generate heated debate among musicians, particularly in Francophone Europe.

Obviously, nineteenth-century worries about tonality were not caused by the specter of atonality. *Tonalité* was first invoked not in relation to what followed it but rather what preceded it. In this case, it was the modal practice of the Middle Ages and Renaissance, whose musics were just then beginning to be transcribed, reanimated, and studied in greater detail. This music also was considered by Fétis to have a special kind of tonality, which he called *tonalité ancienne*. But it was a historical tonality that had been superseded by *tonalité moderne*, creating a crisis among composers (in Fétis's telling of the story) no less dramatic and wrenching than the more familiar passion play from the twentieth century.

The concept of tonality was used by Fétis, then, as a marker of difference. And there were no lack of musical practices that could be usefully differentiated by it. Besides tonalities distanced by age, there were also differing tonalities separated by place. As nineteenth-century Europeans were learning more and more about music from afar, awareness grew that musical tonalities were not the same over the face of the earth, whether from the Levant and Far East, or from Africa and the South Pacific. But there were even differing tonalities in our own backyard. As some ears turned to the picturesque folk music that could still be heard in the provinces, it was becoming clear that French musical dialects were hardly uniform in nature. And then there were more anxiety-provoking tonalities, many of which came from the pen of an opera composer active across the Rhine: dissonant chromaticism and vertiginous modulations that seemed to challenge expectations of normative tonal behavior. All this suggests that tonality is a theoretical construct born of alterity and anxiety.

These are some of the rich stories that I want to tell in this book. The main actor in most of these tales—perhaps I should say, the main impresario—will be Fétis, whose voice and work dominated French musical scholarship in the nineteenth century like no other. As a respected professor of composition and counterpoint in the Paris Conservatory (and after 1833 as head of the newly founded Brussels Conservatory), as a prolific critic and pundit whose professional career spanned more than half a century, and above all as one of the most learned and widely published scholars of music history and theory, Fétis wielded unprecedented influence in the musical world of nineteenth-century Europe. And nowhere was this influence more in evidence than with his theory of musical *tonalité*. But his was by no means the only voice. Many others—scholars, composers, critics, and listeners—joined

in the debates concerning tonality, sometimes in unison with Fétis and just as often *per motum contrarium*. The breadth of these conversations was impressive. We find the concept of tonality invoked by editors dealing with the restoration of Gregorian chant or transcribing medieval polyphony; we will see the notion invoked by collectors of folk music, by travelers recording their impressions of Arabic incantations or Chinese court music, by scholars attempting to imagine the earliest music of the Greeks or Egyptians, and by critics attempting to explain the music of *Tristan* and *Carmen*. It was even a concept in the mind of many composers who wrote their music self-consciously attempting to emulate—or perhaps steer clear of—certain kinds of tonality. In short, *tonalité* was black matter in the French musical universe; maybe it was not always seen, but its presence could be everywhere felt. And the writer who was most responsible for first theorizing this mysterious historical force and bringing it to the attention of a whole continent was Fétis. With indefatigable energy, he produced voluminous writings on every aspect of the theory and history of tonality that still astound by their ambitious scope and audacious originality.

To be sure, our Belgian critic was not without his faults. Arrogant and irascible by nature, Fétis could be careless in his research, overreaching in his claims, and intolerant of criticism. Succumbing all too readily to the *esprit du système*, he was quick to seize on any evidence he could find so long as it seemed to confirm his theories and conversely to overlook or explain away any conflicting evidence. (In other words, I might add with a wink, he would be immediately recognized as a familiar figure in academia today.) Then there is the crass orientalism we can find running through his writings on world music, the acidic racism that is expressed in his late writings. Of course we know sadly that this was hardly unique for a European scholar active in the mid-nineteenth century. But it still can make us cringe today.

It is not my intention in this book to paper over the faults and prejudices of Fétis for the sake of hagiography. And over the course of my study, I will have many occasions to pause and consider the soundness of his arguments. But let me also be clear: I will not try to correct every mistake with the “right” answer based on current research, to adjudicate every polemic in which he engaged, still less to apologize for every obtuse comment and arrogant prejudice. I trust my readers will understand that we are many generations removed from the scholarly and speculative writings I will be looking at and that there is probably not a single one of Fétis’s major claims that could be presented today without serious qualifications if not actual correction. It is not the point of this book to provide these qualifications and corrections. While I will occasionally refer to contemporary research on cer-

tain issues when I think it might be illuminating to the argument at hand, my main intention is to present the ideas of Fétis and his contemporaries as clearly and sympathetically as I can.

Ultimately, I am curious to understand what it was about tonality that made it such an appealing, almost essential concept holding such urgency in Fétis's day. Put another way, I want to know what the problems were that tonality seemed to address so effectively that it quickly ingrained itself within nineteenth-century musical discourse. Over the seven chapters of this study, we will hear from many voices. Fétis's voice will be a constant; but a considerable number of other European writers responded to his ideas on tonality in differing ways (and with differing levels of enthusiasm). The stories I will try to tell are ones that largely took place in the French language, although a few German, English, and Italian writings will make occasional cameo appearances.

To unfold these multilevel stories, here is the plan I will follow. I begin in chapter 1 with a historical account of Fétis's theory of tonality, tracing its roots in earlier theoretical and philosophical traditions. While there is an "empirical" scale-based element to his notion of tonality that is a legacy of the Italian *partimento* tradition, we will see that his theory ultimately represents a metaphysical conception of tonal relations that owes much to German idealist philosophers such as Kant and Hegel, whom we will see provided catalytic inspiration. Their idealism also furnished Fétis the grounding he needed to construct an ambitious universal history of tonality that encompassed all ages and cultures. In particular, we will look closely at the famous four "orders" of tonality by which Fétis reconstructed the evolutionary stages of Western musical tonality and dared thereby to predict its future.

In chapter 2 I will survey the first of several nineteenth-century areas of musicological research in which Fétis's notion of tonality played itself out: the plainchant reform movement that so engaged French and Belgium clerics (long before, incidentally, the better-known work of the Solesmes monks after midcentury). Fétis's reification of an original "plainchant tonality" provided the justification that many church authorities were seeking for purging chant practice of all pernicious influences that were regarded as the anachronistic intrusions of a later, tonal practice and return that repertoire to the unsullied, purified modality characteristic of *tonalité ancienne*. But there was hardly any consensus on the matter. The debates that ensued—from the use of accidentals in Roman chant to the kinds of organ accompaniments that should be sanctioned in church—were only the first of many polemics that Fétis's writings would generate.

In chapter 3, I will pursue another topic of historical musicology: the ap-

parent emergence of tonal markings in the music of the Middle Ages. Fétis was confident that the beginnings of modern tonality could be dated quite precisely to the beginning of the seventeenth century in the music of Monteverdi. But as other musicologists began to learn more about the music of the Middle Ages, suspicions arose that tonality might have had a much older pedigree than Fétis had allowed. (The question of *musica ficta* was a key point of contention, as the introduction of a chromatic semitone by singers within an otherwise pure diatonic fabric suggested to some editors the affective quality of leading tones, one of the key characteristics that Fétis attributed exclusively to modern tonality.) In addition, many of these same observers thought that much vernacular song from the Middle Ages, especially the music of the *trouvères*, was clearly tonal in orientation. Little by little, the clear demarcations Fétis laid out in his contiguous stages of tonal evolution were being breached.

Further complicating this story were the popular folk songs (the *chansons populaires*) that French collectors were beginning to transcribe and publish in various anthologies throughout the nineteenth century. In chapter 4, we will see how many of these songs, particularly those from the more remote provinces of France, seemed to be based on differing scale systems, some of which suggested modal origins that could be traced to the Middle Ages or perhaps even earlier to the Greeks. But the picture was not clear. Some of the oldest of the popular songs sounded to many ears as if they were in simple major or minor keys. That evidence suggested that tonality might have roots in vernacular traditions despite the insistence of a number of church musicians that the modality of the church was really the authentic language of the people. Tonality was becoming politicized.

In chapter 5, I will widen our view to look at tonalities outside of Europe. The various scale systems of Arabic and Indian music that European scholars were discovering in the nineteenth century, with all their microtones and unusual interval structures, were proof enough to Fétis that tonalities varied widely across the globe and that each was particular to the needs and character of the race that embraced it. As Fétis studied many of these musical traditions more closely, he began to wonder whether the origins of these various tonalities might be the same as those of the Indo-European language family whose genealogies were being reconstructed by contemporaneous linguists. At the same time, though, Fétis fell under the sway of some of the more invidious racial theories that French ethnologists were beginning to promote. He concluded in some of his very last writings that biology and race must have played a more determinant role in the evolution of tonality than he had earlier thought. This led, then, to animated debates among many theo-

rists about the historical filiations of tonalities across cultures and how they might have been transformed and changed over time.

In chapter 6, I will revisit some of Fétis's theoretical arguments and subject them to closer scrutiny. In particular, I will examine Fétis's criticisms of his theoretical predecessors and try to understand why he felt that their many attempts to find a scientific basis for the theory and practice of music in mathematics or acoustics must inevitably fail. The French, we must recall, had inherited in the theory of Rameau perhaps the single most ambitious attempt to naturalize tonal harmony. If Fétis concluded that Rameau's efforts (not to mention those of almost all of his theoretical successors) to ground tonality in natural laws of empirical science were ultimately chimerical, other investigators were not willing to give up the dream so easily. Many of them continued in their efforts to find a universal theory of tonal music. This is a rich and extensive literature that is little known today, overshadowed as it is by so much German theorizing. But as we will see, this literature, too, was itself in almost constant dialogue and contestation with Fétis's influential work.

Finally, in chapter 7 I will turn to the future of music. Fétis famously designated some of the most advanced music of his day as *omnitonique*, and he predicted that the rapid and often chromatically elaborated modulations to remote key areas characteristic of this order would continue to increase in number and intensity. Though it is not quite right to say that Fétis anticipated the death spiral of tonality that Schoenberg supposedly finalized, there is no doubt that he did see tonality careening into an uncertain and unhappy future. Anxiety about the future of musical tonality was also on the minds of many French composers, and some of them were well aware of Fétis's writings and those of his critics. But by then, the notion had long seeped out of the scholarly literature and become part of common musical parlance (as today). As French composers worried about their own national identity and musical patrimony—especially with the specter of Wagner looming from across the Rhine—the question of musical tonality assumed renewed urgency. For some, this meant keeping up with the most modern tonal practice then being exported by Wagner and his devotees; for others it was just the opposite: they retreated into an older modal language that was imagined to be part of the musical patrimony of France's glorious past (*unitonique* music, as Fétis called it). Still others went in a differing direction altogether and experimented with exotic oriental topoi and scale systems. *Tonalité* seemed to be a persistent riptide in the volatile maelstrom of French musical culture in the nineteenth century.





Let me finally say a word about my invocation of *stories* in the title of my book. I use the term quite deliberately, not only to designate some of Fétis's own writings but also the many episodes and encounters described in the individual chapters. Thus, I hope to be a teller of stories in this book, or perhaps more accurately, a reteller of stories. For each of the many individuals we will be hearing from in this book—Fétis above all—have tales to tell. By this I obviously do not mean to say that all the arguments and evidence offered by Fétis and his contemporaries are mere fictions (although many musicologists today might surely—and perhaps rightly—deem some of them to be just that). The more important point I wish to draw out is that tonality can best be understood not just as an object to be described and analyzed but also as a historical subject that emerges most vividly from storytelling.

Hayden White has argued that many French historians of the nineteenth century favored specific discursive modes and rhetorical tropes in order to create their vivid historical narratives.<sup>6</sup> In this way, then, history became essentially an art of storytelling. (The French word *histoire*, we might recall, can mean both a “history” as well as a “story.”) But it was hardly something for which White faulted them. On the contrary, he argued that only through the medium of the story can real meaning and interpretation arise out of a mere sequence of events.

I have tried to employ a style of narrative in my book that underscores this notion of history as story by giving voice to the many individuals whose writings I cover. (I hope and trust readers will not mistake this envoicement as my own uncritical acceptance of their arguments.) As Brian Hyer reminds us, tonality is one of the great myths of Western music, and Fétis one of its greatest mythmakers.<sup>7</sup> And as with all great myths, generations of rapt listeners have found in the subject something profoundly important, something profoundly true, and thus something that needs to be told and re-told anew even as the details of its story change with each teller. The stakes for many of these stories about tonality, as we will learn, were surprisingly high—just as they are in our own day. So as we continue to engage a musical language whose own physiognomy has become ever more blurred through digital iteration and global amplification, it may be instructive (and perhaps even consoling) for us today to hear from the first generation of bards who sang tales of tonality's adventures. They are stories that remain unfinished still.

## Tonal Imaginations

The excitement was palpable. In the fashionable concert salon of Herz just off the rue de la Victoire, an audience of the elite of Parisian musical society comprising some seven hundred spectators gathered on a cold, overcast winter afternoon in 1844—February 18, at 2:00 p.m., to be precise. The leading music critics and journalists had taken the front seats. But there were also large numbers of faculty and students from the Conservatoire to be seen in the audience as well as members of the Institut and Académie. Scattered in the rear rows were a smattering of Jesuit and Benedictine monks, conspicuous in their black cassocks among the well-dressed intelligentsia. A number of well-known musicians and salon artists could also be spotted in the room. Even Franz Liszt, it was whispered, had snuck in through a back door to take a seat.

And what kind of concert brought this large, motley group together? What famous musician had they come to see perform on that cold afternoon? Why, it was no concert at all. Instead, they had all gathered to hear a lecture—a lecture, of all things, on the history and theory of harmony. One might ask why this erudite topic could have been of so much interest to so many. But then again, no ordinary lecturer was speaking that afternoon. For they had all come to hear François-Joseph Fétis (1784–1871), the famed Belgian musicologist who had long gained a formidable reputation in Paris as a learned historian and theorist of music, conservatory professor, composer, critic, conductor, biographer, and indefatigable essayist.

Fétis knew how to pack the hall. In a series of promotional notices in the *Revue et gazette musicale*, he promised that this *cours gratuit* would be no ordinary recitation of technical theory or dry historical facts.<sup>1</sup> Rather, Fétis promised something far more profound, far more astonishing “for the use of all artists and amateurs of music.” He would disclose to his listeners noth-

ing less than the single universal principle of music, one that could explain the complete nature and history of music, sweeping away in one stroke the rubbish of erroneous theory that had accumulated over time. It was a principle that would explain the affective power of music, why it was that certain kinds of music could move us so deeply (and other kinds could not); it was also a principle that could be seen to have guided the development of music from its earliest ages and one that could also explain the diversities of music we can hear among differing cultures and peoples. Indeed, so powerful was this principle that it even promised to predict the next stages into which music would develop.

And what was this encompassing principle, this universal law, this all-powerful creative force? It was none other than that of *tonalité*. In the epic story Fétis related to his audience, “tonality” assumed the Promethean role as the guiding loadstar of musical development in all its historical and theoretical facets. It is this principle that was the subject of his four lectures during those two weeks—and we might also say, in most of the many writings he produced over his rich and productive eighty-seven years of life.<sup>2</sup> Rarely before had any musicologist proposed a theory of music that was so grandiose in its scope, so audacious in its claims, so self-confident in its predictive power.<sup>3</sup> Could Fétis possibly meet the great burden he placed on this one idea?

### CHORON AND THE CONCEPT OF *TONALITÉ*

But first things first. Fétis, we should note, did not coin the locution *tonalité*. That honor seems to belong to his former mentor and friend, Alexandre-Étienne Choron (1771–1834).<sup>4</sup> Although trained as a mathematician, Choron harbored a lifelong passion for music, particularly the sacred Italian choral repertoire of the sixteenth and seventeenth centuries. As a youth, he read widely in the fields of music history and theory. Subsequent study with the Abbé Bonesi exposed him to the Italian partimento pedagogy of Francesco Durante and Nicola Sala. These studies eventually led him in 1804 to co-author (along with Vincenzo Fiocchi) the *Principes d'accompagnement des écoles d'Italie* and four years later a much expanded, multivolume treatise, the *Principes de composition des écoles d'Italie*. While a good deal of this latter work consists of harmonic and counterpoint pedagogy drawn from Sala, Friedrich Wilhelm Marpurg, Padre Martini, and Galeazzo Sabbatini, it is also noteworthy as one of the greatest repositories of printed Italian Renaissance polyphony hitherto gathered within a single luxurious publication.

During this period, Choron also published a “summary” of the history of music, one part of which consisted of a “Historical Dictionary” of the most eminent “musicians, artists and amateurs, dead or alive” that he coauthored with François Fayolle.<sup>5</sup> While much of his *sommaire* was drawn from earlier publications by Burney, Hawkins, and Forkel, there was also much new, as we will shortly see. Choron’s history was the first serious attempt by a French scholar to write a history of music in which changing tonal systems were seen as integral to the development of music.

Choron was an ardent advocate for the reform of church music, which was, he repeatedly lamented, in desperate shape. He was particularly alarmed about Gregorian chant, which was virtually unrecognizable in its current, distressing state.<sup>6</sup> In order to understand where recent practice had gone astray, he began to study older treatises and manuscripts of medieval chant. In 1811, he accepted appointment as the Director of Music of Religious Ceremonies by Napoléon, one charge of which was to help revive the practice of chant in French churches.<sup>7</sup>

One final chapter in Choron’s busy career should be noted. After a short and unhappy stint as *régisseur-général* of the opera house (officially the Académie royale de musique), Choron founded in 1820 a choral school for young singers through which he could devote himself to the study and performance of his beloved Italian repertory of early vocal music. Granted support by the recently crowned Bourbon king, Louis XVIII, Choron’s school was renamed the Institution royale de musique classique et religieuse in 1825. As part of his charge, Choron directed a series of musical performances (or “exercises”) with his singers in which the classical sacred works of Italian polyphony could be heard in public.<sup>8</sup> While the Institution collapsed shortly after the 1830 revolution, during the Restoration it played a major role in bringing to the public’s attention a range of early choral music and setting a pattern of historical music concerts that would be emulated by Fétis. (Choron’s school was resurrected, incidentally, at midcentury by Louis Niedermeyer, and it became one of the most influential schools of sacred music in the second half of the nineteenth century. We’ll hear more about the École Niedermeyer in the next chapter.) For now, though, it suffices to note that Choron’s musical activities in the first three decades of the century were dominated by his study, teaching, editing, and performance of early music.

Based on his deep immersion in historical sacred chant and Renaissance polyphony, Choron soon began to sense how different the tonal language of this early music was from that of contemporary music, and he attempted to describe these differences more concretely.<sup>9</sup> The older style of music is most clearly to be heard in the ecclesiastical modes of the early church, modes that

he thought were rooted in the music and theory of the ancient Greeks. Choron called this “tonalité antique.” It differed from the “tonalité moderne” or “tonalité vulgaire” of the present day, which relies on a system of keys and harmonies that was unknown within the earlier tonal system.<sup>10</sup>

Choron realized that one of the most important features of modern tonality was its use of the leading tone (*note sensible*) combined with the fourth scale degree. The resulting tritone or diminished fifth helped to define the tonic center of each key and was what gave the dominant seventh chord its unique key-defining quality. “The notes of the tritone,” Choron wrote, “seem in effect to summon [*appeller*] the notes toward which they tend to resolve. This is why they are called ‘appellative’ notes.”<sup>11</sup> But it was quite the opposite in the ancient tonality, where no such appellative urges were registered. This was hardly surprising given that the interval of a tritone was strictly proscribed by theorists of the time.

Choron also thought he knew where the historical boundary lay between these two systems. It was at the end of the sixteenth century, when “modern tonality was beginning to be sensed most strongly and to exercise its influence in composition.”<sup>12</sup> Just as Fétis eventually would, Choron credited Monteverdi “to whom of all the great masters . . . modern tonality and harmony owe their greatest debt” with this discovery.<sup>13</sup> But if Monteverdi was the instigator of this new tonality, it was the great Neapolitan maestro Francesco Durante who, more than a century later, was the one to finally perfect modern tonality in the form we know it today.<sup>14</sup>

These insights helped Choron realize what the challenge was in any restoration of chant. Chant practice had been almost completely corrupted over the centuries by the encroachment of modern tonality. Specifically, it was the mixture of modern major and minor scales (*modes modernes*) with the scales of the ecclesiastical modes (*modes primordiaux*) by contemporary church musicians that had caused chant to degenerate to such a lamentable state. Each constituted a differing system that needed to be kept separate.

But there was more. Choron suggested that other people outside of Europe possessed their own “musical idioms or languages” based on varying scalar systems.

One can imagine the possibility of a great number of different modes by which one could form various systems. Each of these systems of modes will essentially constitute those idioms or languages of music that belong to different races of men. Thus, the peoples of the Levant seem to have a modality completely different from ours that . . . is not well understood to this day. We have shown, or at least indicated, what the tonality of the

Greeks consisted of and that from it was derived ecclesiastical tonality. As for our [tonality], it contains only two modes.<sup>15</sup>

It was a remarkable insight that would greatly inspire Fétis. Each race of people might have their own system of modes or scales, their own special *tonalité*.<sup>16</sup>

Choron's concept of tonality (one could not justify calling it a theory yet) remained undeveloped in his publications. Still, it was suggestive enough that the term was quickly picked up by a number of subsequent French theorists through the end of the Restoration, including Castil-Blaze (1820), Grégoire Orloff (1822), Philippe Geslin (1825), Henri Berton (1829), and Daniel Jelensperger (1830), all who used it to describe elements of the modern major and minor scale system in their practical treatises of harmony.<sup>17</sup> But it was Fétis who seemed to grasp most clearly the potential of this idea for an ambitious reconceptualization of music history.

Fétis would have first gotten to know Choron's writings and perhaps the man himself soon after he left his native city of Mons (in present-day Belgium) for Paris, where our seventeen-year-old student enrolled in the newly reconstituted Conservatoire in 1800 (August 31 to be precise, the ninth day of Brumaire in year IX). In any case, at some point Fétis and Choron became close friends and confidants, a friendship that they would maintain until Choron's passing in 1834.<sup>18</sup>

Yet Choron's own contribution to Fétis's project was more substantial than even this cursory overview suggests. For one thing, much in Fétis's own pedagogy of harmony can be directly traced to Choron's own, earlier formulations. (We will briefly look at some of these filiations later in this chapter, and in more depth in chapter 6.) But there is even more to this story, for it turns out that there are a substantial number of lengthy manuscripts in Choron's hand in the Bibliothèque nationale that were never published but show a remarkable development of his theoretical ideas of *tonalité* through the 1820s. The German musicologist Nathalie Meidhof has recently published a study of these texts and found that Choron seemed to be sketching out a fuller theoretical and historical theory of tonality that anticipates in many striking ways many of the notions that we would later attribute to Fétis. For example, Choron seemed particularly focused on refining the concept of appellative tones, even speaking of the tritone as an "appellative consonance," as Fétis soon would.<sup>19</sup> He also continued to study ancient Greek music theory in an attempt to distinguish a *tonalité antique* and its difference from—and eventual evolution into—a *tonalité ecclésiastique* (Meidhof, 249). Meidhof sees these manuscripts as the "missing link" between Choron's earlier and

somewhat cryptic pronouncements about tonality and Fétis's mature theory of tonality as he began to develop it in the 1830s (246). She plausibly hypothesizes that the subject of *tonalité* must have been a regular topic of conversation between the two men during this time. She concludes from this that the paternity for the concept of tonality should be shared between Choron and Fétis as the result of their hitherto unrecorded "collaboration" (260).

There is much to be said for Meidhof's supposition. In a fulsome entry on Choron that Fétis published in 1837 in the third volume of his ambitious biographical dictionary, Fétis freely admitted that he had read many of Choron's unpublished writings that Choron had showed him. Fétis does not tell us exactly what was in these writings except to say that they "are full of new ideas and profound principles" and "introduce many new ideas in the theory of [music]" such that their publication would no doubt "place Choron among the ranks of the most distinguished men in the literature and history of music" (*BU*<sup>1</sup>, 3:134). Alas, Fétis continues, Choron's own energy and confidence in his ideas flagged. Despite Fétis's continual encouragement to develop and publish them, Choron left his manuscript texts in a box, never to be completed.

Meidhof suggests one plausible reason Choron may have felt uninspired to refine and publish his work. Perhaps he recognized in his younger colleague a more energetic and capable music theorist who could do a better job of it himself (Meidhof, 260). But it also might be that in the course of their conversations, Fétis was forming some of his own ideas that went far beyond what his esteemed mentor might have been thinking. As we will see, when Fétis finally started to publish his own thoughts regarding tonality, the concept would take on a wholly new dimension. But even then, it would take some time to work out its full implications.

## FÉTIS AND THE METAPHYSICS OF TONALITY

It is easy for us to see in retrospect why Fétis would have been initially so drawn to Choron's concept of *tonalité*. And here some background will be helpful. From his earliest memories as a child, Fétis claimed to have been drawn to music, a subject for which he showed unusual talent.<sup>20</sup> He began taking organ lessons from his father (who was also a professional musician) while also making some efforts at composition. As a conservatory student in Paris, Fétis followed a strict regime of piano and composition lessons, attaining some success in the latter by winning second prize in a competition in 1807. But it was music theory and history that increasingly drew his curiosity and energies. Under the tutelage of the "esteemed M. Rey," he began to study

Rameau's theory of the fundamental bass, though he quickly became skeptical about the latter's reliance on acoustics to ground his theory.<sup>21</sup> Catel's theory of harmony, which was adopted by the Conservatoire in 1802, was a slight improvement, in Fétis's eyes, but it still struck him as deficient because of its unsystematic empiricism. Soon our young student was on a quest to find the true principle of harmony.

In his own entry for the *Biographie universelle*, Fétis boasted that he began reading all the music-theory texts he could find as a student, searching for a truly convincing explanation of harmony (*BU*<sup>1</sup>, 4:103–15). At the same time, he began reading widely into the history of music. It helped that early on he showed a propensity for learning foreign languages, allowing him to read outside of the French literature. He must have made real progress, for by 1806, so he tells us, the publishing firm Ballard had already gained enough confidence in the precocious twenty-two-year-old to commission him to edit a new edition of plain chant (*BU*<sup>1</sup>, 4:105).

Choron was an obvious model for Fétis to emulate, then, given the former's activities in questions both theoretical and historical. The whole spectrum of Choron's many musical projects in music theory and history—including the restoration of chant, the reform of music education, the editing and performance of early music, and the writing of treatises of harmony and counterpoint in addition to historical biographies—seems to have served as a template for Fétis's own career ambitions. And there was no greater legacy than in Choron's pregnant notion of tonality. Before we look at Fétis's own take on this idea in closer detail, though, a few more biographical notes are in order.

Fétis married Adélaïde Louise Catherine Robert in 1806, who was all of fourteen years old at the time and came from a well-connected family of noblemen and merchants under the *ancien régime*. But the family fortune took an unfortunate downturn in 1811, forcing Fétis and his wife to move to the northeast of France for several years, where he gained meager employment as an organist and music tutor in the small town of Douai (*BU*<sup>1</sup>, 4:106). He was finally able to return to Paris in the summer of 1818. He spent the next three years trying his luck as a composer in the operatic marketplace, even achieving some moderate success in staging two of them. (Of course it was hard for any composer in Paris during this period to compete with the popularity of Rossini.) Finally, in 1821 his fortune took a turn for the better. He gained a coveted position in the Conservatoire as a professor of composition and counterpoint, where his colleagues included Catel, Cherubini, Berton, Reicha, and Boieldieu. But it would quickly become clear that our young music professor was not going to be content remaining a simple peda-



gogue no matter how prestigious the post. He now saw his new professional position as an ideal launching pad for a scholarly career. And no topic would more preoccupy him over these years than that of *tonalité*.

Fétis's own ideas, however, took some time to mature. In the earliest publications, one would not guess the important role tonality would eventually play in his thought. In his very first entrée into the print market—a short manual on harmony and accompaniment that he brought out in 1823—he does not even use the term.<sup>22</sup> While Fétis made some grand claims regarding the originality and pedagogical efficacy of his harmony method (all boilerplate boasting that one could find prefacing just about any similar treatise of the time), there was actually not much that was new in it. Most of the theoretical ideas presented in his *Méthode* were drawn from other writers. This might not be entirely surprising, as a new convert to Victor Cousin's doctrine of eclecticism, Fétis would have thought it absurd not to use the best ideas from his predecessors. Still, he never let on that so much of his theory was borrowed. But for sophisticated readers who might know some of this earlier theory, there is a shock of recognition on virtually every page.

Fétis began with a basic premise of the Italian partimento school (particularly the teachings of Durante and Sala as conveyed by Choron) concerning the primacy of the diatonic scale and the “natural” harmonies built above it. Among these harmonies, Fétis taught that there are just two principal harmonies of the modern key system—the consonant tonic triad and the dissonant dominant seventh chord, both of which may be inverted. (This was a key element of Rameau's theory of harmony.) All other chords can be derived through various “modifications” of these harmonies by means of substitution and prolongation. Fétis defines substitution as the replacement of the fifth scale degree by the sixth scale degree in the dominant seventh chord, thus producing varieties of half- and fully diminished seventh leading-tone chords as well as dominant ninth chords. (Fétis claims that this was his own discovery, though it is found in Rameau and is also prominent in the theories of Bethizy, Berton, and Choron [*BU*<sup>1</sup>, 4:107].) Prolongation, however, is simply an elaboration of triads and seventh chords through the suspension of one or more of their chord tones. (This is a major feature of partimento pedagogy as well as the harmony treatises of Catel and Choron.) Fétis goes on to illustrate how these two kinds of chord modifications can be combined and elaborated with other techniques of harmonic embellishment.<sup>23</sup> After a short consideration of modulation, pedal points, and an example of the “*règle de l'octave*,” Fétis concludes with an appendix of forty-two partimenti drawn from various Neapolitan masters including Durante, Sala, and Fenaroli. These exercises take up fully half of the publication. (I will return for a more thorough

consideration of Fétis's theory of harmony and its indebtedness to the Italian partimento tradition in chapter 6.)

For now, we might simply note that there is not much new to be seen in this modest manual of harmony and accompaniment. As I have indicated, most of the ideas he introduces can be found in earlier theoretical or practical writings. But there was indeed something new he boasted in the preface to the second edition of his *Méthode* (which came out in 1839). Fétis then insisted that his *Méthode* was unique among all other publications of harmony in its conformance to the "Supreme law of tonality." It is this law

that firmly establishes the origin of all chords and their use. This law, serving as my guide in all my research on music, has allowed me to perfect the works of [these illustrious predecessors] and to bring to the system of harmony all the simplicity and certitude of a mathematical science.<sup>24</sup>

It seems somewhat of an improbable claim given the derivative nature of this modest publication. But it would not be too much longer before we begin to hear more about this "supreme law" of tonality in his other writings.

The next year, Fétis produced another pedagogical work of far greater ambition, the *Traité du contrepoint et de la fugue*. A large folio of some 380 pages, the treatise rivaled Choron's masterwork of two decades earlier in scope, covering and richly illustrating all varieties and genres of strict counterpoint, fugue, and canon. (As with his *Méthode*, this work is also heavily derivative, in this case borrowing much from Choron as well as earlier writings by Fux, Martini, Marpurg, Sala, and quite possibly teaching notes from his colleague in the Conservatoire, Luigi Cherubini, whose own treatise on counterpoint would not be published until 1835.) Here Fétis does introduce for the first time the term *tonalité* in one of his publications, noting that "around the middle of the seventeenth century" musical art had changed direction with a "tonalité nouvelle" that had succeeded the tonality of plainchant.<sup>25</sup> A committee of conservatory colleagues who wrote a report on the *Traité du contrepoint et de la fugue* noted that the real novelty of Fétis's treatise was in its treatment of counterpoint not only in the older tonality of plainchant but in the "tonality of the modern musical system."<sup>26</sup>

Meanwhile, Fétis had decided to make a bold move into the Parisian public sphere. Believing that music journalism in France was badly lagging behind the Germans and English, Fétis decided that he would establish a serious journal of music in Paris in which the latest research on the history and theory of music could be presented in addition to providing the latest news and reviews of musical events in France and abroad. This was

to be the *Revue musicale*. The first issue appeared in February of 1827 and continued weekly until 1835, whereupon it was merged with Schlesinger's *Gazette Musicale* (and henceforth called the *Revue et gazette musicale*).<sup>27</sup> During its nine years of publication, Fétis wrote major articles for virtually every issue.<sup>28</sup> The scope of these writings is staggering. In addition to learned essays on music theory and history, there were reviews of contemporary concerts, operas, and publications; reports of recent musical inventions, activities in the conservatories and other musical institutions (within France and abroad); and biographical essays of famous composers and performers. (These later articles would soon become the foundation for his great biographical dictionary of musicians that would begin publication in 1835.) All in all, the range of writings Fétis offered in his young journal gave a clear preview of his indefatigable energy and catholic interests that would be displayed so abundantly over the next four decades.

One of the articles that Fétis penned at this time is relevant to our current discussion about tonality. It shows us that already by 1828 he was having some new ideas about this topic. In a review of a recently published harmony treatise by a pitiable writer named Victor Derode, Fétis unleashed a barrage of withering criticisms.<sup>29</sup> (The intemperate tone in this review is one to which readers of Fétis's journal would soon become accustomed.) Among the issues that most exercised our critic was Derode's claim that major and minor scales were only secondary, derivative "melodies" based on the "law of modulation"; they could never serve as a starting principle for any system of harmony, he insisted.<sup>30</sup> This was an egregious mistake in Fétis's view, since he was convinced that it was the scale that determined harmony, not the other way around. Most critically, though, the structure of a scale was fundamentally related to—and dependent on—the metaphysical attributes of tonality:

Tonality . . . is a necessary succession of metaphysical attractions and repulsions of sounds to which we submit by unknown, but real, laws; it is the source of all pleasure in music. . . . [The diatonic scale] is thus not simply an arbitrary convention that takes place; this convention, if it exists, is the result of our organization.<sup>31</sup>

Fétis goes on to suggest that tonality arises as a kind of intuition, something constituted in our mind, but not something determined a priori by acoustical or numerical phenomena let alone by caprice. Thus, he could conclude emphatically that "the principal of harmony is a metaphysical fact."<sup>32</sup> Fétis's thinking about tonality, it appears, was taking a radically new turn from where Choron had left it in his manuscript notes.

For all that Fétis was sensing a metaphysical basis for tonality, it was not until three years later that the full implications of this became clear. If we believe Fétis's account of the matter, it all happened in a single moment of revelation one spring day in 1831 while he was taking one of his regular walks through the Bois de Boulogne outside of Paris. Fétis described this transformational moment of enlightenment eighteen years later in the "philosophical preface" to the third edition of his *Traité complet de la théorie et de la pratique de l'harmonie* published in 1849.<sup>33</sup> And while we must grant that much in his Romantic story was undoubtedly embellished over the span of those years, there is no reason for us to doubt that an insight of momentous impact truly did take place sometime around this period. Fétis sets the stage splendidly:

On a beautiful day in the month of May, 1831, I was going from Passy to Paris, and, as usual, I was walking along a solitary road in the Bois de Boulogne, dreaming about the theory of music, always the object of my constant meditations, and of which I wished to create a science worthy of the name.

All at once, he is struck by a momentous realization. It was like a "lightning flash" (*éclair*). So brilliant was it that he collapsed before a tree and sat there in six hours of delirious stupor. During this time, questions he had long been asking seem to answer themselves. (Note how he now switches his narrative from the past tense to the present):

Suddenly, the truth presents itself to my mind; the questions are clearly asked, the darkness dissipates the false doctrines fall piece by piece around me.<sup>34</sup>

His first key insight was that tonality was of a purely ideal nature; it revealed itself before his eyes as a logical hierarchy of relationships conceived and imposed on selected pitch materials by the autonomous intellect, not some external object established by nature that we passively apprehend. Fétis summarizes the essence of his vision as follows:

Nature furnishes as the elements of music only a multitude of sounds that differ from one another in intonation, duration, and intensity, by the greatest or least nuances. Amongst these sounds, those whose distinctions are sufficiently perceptible to affect the organ of hearing in a determinate manner become the object of our attention; the idea of there being

relationships between them arises in the intellect, and under the operations of sensibility on the one hand and will on the other, the mind arranges them into differing series, each one of which corresponds to a particular order of emotions, feelings, and ideas. These series then become types of tonalities (*types de tonalités*) and rhythms that entail necessary consequences, under the influence of which the imagination enters into play, to create the beautiful. (*Traité*, xi–xii; *Treatise*, lii)

Like Choron, a critical feature that Fétis identified in “modern” tonality was the gravitational force of the tritone (or diminished fifth) spanning scale degrees  $\hat{4}$  and  $\hat{7}$  in the diatonic major scale, or to use the designation he preferred, the *quint mineure*—a “minor fifth.” When sounded together with the fifth (dominant) scale degree, the minor fifth seems to possess an almost irresistible attractive force to resolve semitonally to scale degrees  $\hat{3}$  and  $\hat{1}$ , respectively, thereby defining the central tonic chord of a key. This is what ultimately distinguishes our modern tonality from the tonality of earlier music.

If we examine what actually distinguishes the tonality of our modern music from that of plainchant, we will see that when the interval of the fourth degree and the leading tone is added to the dominant [scale degree], they become the principal constituents of the dominant seventh [chord] that determines the attractive character of the leading tone, and this note alone makes all the difference between our tonality and that of plainchant. Now, the leading tone is precisely what I call the *expressive accent*, because on its account or by the attractive note of the fourth degree, the impassioned character of all music is manifested.<sup>35</sup>

Fétis used a number of metaphors to describe the attractive force of the leading tone and its companion fourth scale degree in modern tonality. Most commonly, he referred to an “affinity” (*affinité*) between these tones and their notes of resolution, borrowing a term that was commonly used in the chemical sciences to describe the mutual attraction of certain elements or compounds. Elsewhere, Fétis called this an “appellative” relation—*une relation appellative*—in that the notes of the minor fifth seem to “summon” or “call forth” their notes of resolution.<sup>36</sup> The appellative force of these tones was enhanced by the semitonal motion of their resolution in contrary motion. It is in this one interval (embedded, of course, in the full dominant seventh chord) that the whole dynamic of modern tonality lies, one that can be seen to account for the behavior of both melody and harmony.

It is important to stress that Fétis believed the appellative quality we hear

in the dominant seventh chord was not inherent in the notes themselves; rather, it is something that we intuit ourselves, something that we impose, so to speak, on the music. This is a critical point of difference between Fétis's theory and many of the predecessors on whom he drew. While theorists since Rameau had acknowledged the tonal-defining power of the dominant seventh chord and the attractive tendency of the *note sensible*, most had attributed this fact either to mathematical or acoustical arguments. Classical canonic theory, for example, taught that any dissonance was "compelled" to resolve to a consonant interval because of its complex ratio. Several centuries later, Rameau theorized in the *Traité de l'harmonie* that the dissonant seventh within the dominant seventh chord acted as a kind of mechanistic shock propelling the interval toward a consonant resolution. In later writings, Rameau turned this very Cartesian model on its head and came up with an idea, modeled on Newtonian physics, suggesting that the real force of the authentic cadence lay not in the dissonance of the dominant seventh chord but rather in the attractive power of the consonant tonic triad that acted as a gravitational center of rest toward which all dissonant (and nontonic) tones are drawn.<sup>37</sup> In Fétis's view, nothing could be further from the truth than these "deterministic" theories. This is surely one reason he consistently referred to the interval as both a "minor fifth" and a "consonance"; it was not any dissonant quality of the interval that compelled a resolution as it was the tonal nature of the two scale degrees placed in juxtaposition.<sup>38</sup>

The same principle of subjective selectivity applied to the very scales and modes that differing peoples at differing points of time also used for their various musical systems. There is thus nothing inherent in the diatonic scale system to privilege it over any other scale system. Only through a combination of sensibility and will on the part of the sentient musician did the major and minor scales emerge as the basis of our own tonality. The appellative forces we intuit in our key systems are really apprehensions we project on particular notes of the scale. There is nothing in nature that demands this be so. In short, tonality is not an a priori fact of nature but a metaphysical intuition of the mind.

## TOWARD AN IDEALIST PHILOSOPHY OF MUSIC

This metaphysical reconception of tonality (Wilibald Gurlitt aptly called this Fétis's "Copernican turn to Romanticism"<sup>39</sup>) marks an extraordinary moment in Fétis's theory, and we may wonder what the catalyst could have been. Returning to the work of Nathalie Meidhof mentioned earlier, it might be supposed that the question of tonality and metaphysics came up during

Fétis's conversations with Choron. But as there is no evidence in the manuscript sources we have that Choron was ever contemplating such a thing, we would do well to look elsewhere. And Fétis actually has left us testimony as to where that might be.

In a lengthy and eye-opening letter to his friend Eugène Troupenas from 1838, Fétis confided that ever since a memorable conversation with the famed physicist and mathematician Joseph-Louis Lagrange that he had as a youth, he had been looking for some alternative to the tyranny of numerical calculation in the grounding of music. The moment came, he reminds Troupenas, when together they attended a series of lectures in 1832 given by the Polish philosopher and mathematician Józef Maria Hoene-Wroński on the critical philosophy of Kant. Despite some shortcomings of the lecture, the experience was a complete revelation to Fétis and instilled in him an avid interest in German idealist philosophy: "The three or four sessions that he gave us were for me like a lightning flash (*trait de lumière*) and converted me to idealism."<sup>40</sup> "From that point on," Fétis continued, "I became a new man, and I made the courageous resolution at the age of 48 to undertake again a serious and profound study [of philosophy] despite all the embarrassment and confusion in which I was thrown and the overbearing work that I faced." Over the next few years, Fétis claimed to read thoroughly the work of Kant as well as many other publications from the newer generation of idealist philosophers coming out of Germany. Among his readings were the writings of Fichte, Schelling, and Hegel ("*an extraordinary man unknown in France*"), not to mention many classical philosophers from Plato and Aristotle to Bacon, Leibniz and Descartes.<sup>41</sup> His reading was evidently so comprehensive, he modestly added, that he thought he had "now arrived at the point whereby I could teach philosophy at a university and perhaps excite some interest."

We should stop here for a moment and point out that Fétis's story does not exactly align with other claims he made about his intellectual development. (And this should caution us to take too literally any of his own biographical details.) Besides the discrepancy that the date he assigns to his road-to-Damascus revelation in the Bois de Bologne (reported in the *Traité*) precedes the lectures of Wroński by one year (reported in his letter to Troupenas), there were other places and times when Fétis claimed to have received jolts of insight that steered his work in new directions. For example, in one remark made much later in his life, he credited a remark of Leibniz as yet another "lightning flash" that spurred him toward his idealist path and to look within the intellect for the true meaning of music, not outside in nature.<sup>42</sup> On the other hand, maybe there was no flash of lighting at all; he elsewhere seems to backdate his metaphysical conversion by claiming

that he had been assiduously studying philosophy during his time in Douai. In those several "idyllic years" he passed in the Ardennes beginning in 1811, he tells us, his "principal occupation" was the study of philosophy, which he deemed "indispensable for developing the principles of the theory of music and for the analysis of the history of this art" (*BU*<sup>1</sup>, 4:106). He counted these years among the "happiest" of his life. Thus, to date Fétis's idealist "conversion" to a particular moment may be neither possible nor necessary. His dramatic Pauline revelation in the Bois de Bologne quoted earlier sounds very much like the fine story it is, presented in order to dramatize the radical break he envisioned his theory of tonality to be and perhaps to tie it to other similar moments of ecstatic revelation that seem to be such a favored trope in French intellectual history.<sup>43</sup>

But whenever and however it took place, there seems no question that German idealist philosophy offered Fétis a new way of thinking about tonality that obviously proved enticing. Not that his engagement with German speculative idealism was unprecedented. Throughout the second quarter of the nineteenth century, there was among French-speaking intellectuals a notable fashion for the latest German philosophy. The ideas of Kant, Schelling, and above all Hegel are unmistakably evident in the writings of the historians Edgar Quinet and Jules Michelet and the early philosophy of August Comte.<sup>44</sup> But without doubt, the most enthusiastic French student of German thought in Fétis's day was Victor Cousin, whose philosophy of "eclecticism" was such an influence on Fétis.<sup>45</sup> Cousin knew both Schelling and Hegel personally, and after arranging the latter's visit to Paris in 1827, he presented a series of lectures on Hegelian philosophy in 1828 that stirred great interest among Parisian intellectuals.<sup>46</sup> Wroński, then, was only one of many intellectuals in France who fell under the spell of Hegel.

Whatever the source, the telltale signs of German speculative idealism can be found throughout Fétis's writings on *tonalité* after 1830. And it is only by understanding some of the principal tenets of German idealism that the broader program of Fétis's theoretical and historical work can be properly grasped.<sup>47</sup> If his application of the ideas of Kant, Schelling, and Hegel occasionally suffered from misunderstandings, we can hardly lay all the blame on Fétis. German idealist philosophy remains to this day notoriously challenging to penetrate. And there was no lack of disagreement among the idealists themselves. What is really extraordinary is that Fétis was able to envision as coherent a system as he did using such dense intellectual materials.<sup>48</sup>

Fétis's idealist concept of *tonalité* can be shown to be manifest in two ways. First, there is a "negative" element in which Fétis criticizes his theoretical predecessors' vain efforts to discover viable theories of harmony based





Figure 1.1. Lithograph of Fétis by J. B. Madou, published in 1831. Cabinet des estampes, Madou S. II, 8274of<sup>o</sup>, Library Conservatoire royal—Koninklijk Conservatorium, Brussels. Courtesy of the Library Conservatoire royal—Koninklijk Conservatorium, Brussels.

on “deterministic” principles. Second, there is a “positive” element in which he attempts to formulate a properly idealist theory of tonality, one that can simultaneously be seen as a culmination of a grand historical process of unfolding tonal consciousness. At a deeper level, these two projects can be seen to be resolved dialectically within Fétis’s own encompassing idealist vision of tonality.

Let us first begin by considering Fétis’s critique of historical theories of harmony, juxtaposing his arguments with those of the idealist philosophers from whom he drew. While Fétis claimed to have been studying historical

documents of music theory since his youth, it was beginning in 1827 that he first published anything on this subject. In various articles in his *Revue musicale*, as well as the first edition of his *Biographie universelle* (1835–44), we find him critically analyzing the arguments of numerous music theorists, all the while developing and refining his own theory.<sup>49</sup>

But it took Fétis some time to get his thoughts in order. His first attempt to sketch out a history of tonality based on idealist tenets was the *Esquisse de l'histoire de l'harmonie*, a privately circulated monograph published in 1840. This latter work would then be reworked as the fourth book of his harmony treatise appearing in 1844. (We will consider this text in greater detail in chapter 6.) Most significant was a new preface he added to the third edition of the *Traité* in 1849 that offers his most mature and detailed thought on the role of tonality in the history of music.

In all of the historical music theories he read, Fétis discovered that a single paramount flaw recurred over and over: determinism. Theorists from the earliest times looked to nature—whether in the ratios of whole numbers or the acoustics of the vibrating string—to explain the basis of music. But if tonality were truly a construct of the intellect, it would be useless to search for some “natural” principle of tonality outside of the mind. If something like the acoustical overtone series did delimit the harmonies musicians were able to use, “this would be a strange infringement of the effect alleged by certain sophists of secret influences [*causes occultes*] on our decisions, and it would strike a severe blow to our philosophical freedom!” (*Traité*, 250; *Treatise*, 248). Just as the project of Fichte and Schelling (and in a somewhat different way, Kant) was to counter the determinism of eighteenth-century materialist philosophy by reinstating the autonomous and free ego in their philosophical systems, so, too, did Fétis want to counter what he saw as the fetters of acoustical and mathematical music theories.<sup>50</sup>

For Fétis, the mind constitutes “tonality” in much the same way Fichte and Schelling argue the will constitutes the world. Tonality is an “absolute” concept formulated within the intellect. Relationships between pitches are not established by nature; rather, they are “logical” and “necessary” ideas by which “the notions of relativity and quantity inherent in these relations are but forms of our understanding.”<sup>51</sup> This is why tonalities can vary over time:

Do we not have proof that tonality has not everywhere been the same in every age? Do we not know that even today it is not the same with all peoples, and that in Europe it is formed in a very different manner in the music of the church and in that of the theater? Moreover, these tones given by nature are indeed the elements of a scale, but do not determine

its form, upon which the character of all music depends. It is therefore necessary to recognize that the mysterious law that guides the affinities of tones has another origin; in fact I could find it only in human organization. (*Traité*, xii; *Treatise*, li)

Depending on the constitution of their mind (their “organization”), differing races will select differing scales with varying degrees of appellative tension. Asian cultures (“la race jaune ou mongolique”), Fétis observes, showed a predilection for various “gapped” scales (such as the pentatonic) for their music. Such scales seemed to lack the semitones that would generate sensual affinities, resulting in music that is “grave” and “monotonic” (*Traité*, xxi). The music of the Semitic people, though, seems to have an excess of tonal affinities given the multitude of microtonal inflections found in their modes. This abundance of smaller intervals, Fétis thought, results in music that is “languorous” and “sensual,” a music “conforming to the *moeurs* of those nations that conceived it.” (We will return to these arguments in chapter 5 for a much more thorough interrogation.)

The different scale systems that have historically been employed in the West offer further proof of the variable nature of tonality. In “Plain-Chant tonality,” the reposeful character of the various ecclesiastical modes based on the diatonic gamut results in a “sublime sentiment” perfectly in accord with the contemplative needs of the Christian faithful (*Traité*, xxix–xxx). Such a sense of repose, however, is precisely what is lacking in “modern tonality,” with its stimulative accents and modulatory turns caused by the appellative chord of the dominant seventh. Only with the rise of such a sense of powerful attraction was it possible to develop the modern secular genres of dramatic monody and opera.

In every historical culture, Fétis found a multitude of differing scale systems, accents, and rhythms confirming his view that “all of humanity rejects this musical fatalism by the diversity of principles and multiple forms of art that allow only absolute unity” (*HGM*, 1:7). What leads the people of a given culture to select the scales that they do? One factor seems to be biological. Particularly in his later writings, Fétis argued that innate racial characteristics (such as the “cerebral conformation” of a people) direct them to a particular tonality. In his earlier writings, though, Fétis was less dogmatic on the question, allowing that culture and education could play a factor as well:

Instinct and the influence of circumstances may direct us without our knowledge in the modifications or transformations that we cause them to

undergo. But barely do these modifications or transformations manifest themselves to our feeling, when the mind takes hold of them and organizes them in a systematic form. Then our aesthetic faculties develop in the domain of the new tonal order that is offered to them. (*Traité*, xxxi; *Treatise*, lxxv)

Of course this explanation may seem to beg the question as to how tonality arises by shifting the burden from acoustics and mathematics to those of “organization of the mind,” “aesthetic faculties,” and “instinct”—but we will see that Fétis does have an answer to this challenge. At the same time, the diversity of tonalities he observed confirmed to him the wisdom of Herder’s historicism: it would be precarious to speak of tonalities progressing, since each tonality properly reflects the historical and cultural circumstances in which it is found. Hence Fétis’s frequently repeated admonition that “art does not progress, it transforms.”<sup>52</sup>

Here, then, arises, the rationale behind Fétis’s adamant rejection of acoustics or mathematics as determining principles of tonality. If the *corps sonore* or the *senario* could be established as the source and justification of tonal harmony, then there should never have existed the diversity of tonalities to be found over history and in non-Western cultures. More critically, perhaps, if it was nature that established tonal principles, then the intellect would be reduced to a completely passive role. But this would be tantamount to naive sensualism. Alas, if “sensualism and fatalism have fallen into dispute with philosophers,” Fétis lamented, “they have yet a lively existence in the preconceptions of artists.”<sup>53</sup> Any such theory of sensualism was intellectually and even morally repellant to Fétis, reducing music as it does to some epicurean stimulation, wherein there would be little difference in the merit of a composer from that of a cook.

Naturally, Fétis could not dismiss altogether empirical sensualism when discussing music. We apprehend musical tones with our ears, after all. But this was only one part of tonality. As he would frequently point out, tonality also required the imposition of our will on the tones we perceive. When he speaks of “le sens musical,” he always means a two-step process of perception and intellection:

The more closely we examine [the issue], the more evident it becomes that the fixed forms of the series of sounds that we designate under the general names of *modes or scales* and *genres* are actually direct products of the double activity of human perception and intellection.<sup>54</sup>

And this can be easily expressed in dialectical form: from the raw phenomenon of pitch, intensity, and duration perceptible to the ear, the intellect selects and rationally organizes this material, resulting in the synthesis of tonality.

Still, the question remains open why an individual—let alone a whole culture—might select the tonality it did. Is it entirely a subjective choice, or might there be some deeper logical or even biological cause that explains the selection and transformation of tonalities over time and space? Here Fétis found just the answer he was looking for in the philosophy of Hegel. This was actually the most important part of Fétis's revelation that spring day in the Bois de Boulogne. What seems to have happened in 1831 is that for the first time, Fétis perceived a deep *historical* dimension to tonality; he was able to understand why the diversity of tonalities he had observed in history succeeded one another in the order they did. It was during those six hours passed under a tree that "the historical tableau of every conception of art in all its tonal forms from antiquity to the present day passed before my eyes" (*Traité*, xii). Then and there, he understood "the principles and causes of their transformation," principles so certain that he even believed himself now capable of predicting the future course of tonality. And here is where Hegel's philosophy provided such a powerful perspective.

For Hegel, history was the self-realization of the "world spirit" in which pure reason is "actualized" over time.<sup>55</sup> This is a progressive and fully teleological process guided by the "divine idea" of universal freedom as it is ever more concretely worked out in individual consciousness and over history in differing political states. Hegel traced the history of this awareness from its beginnings in the oriental world through successive stages in the Greek, Roman, and finally Germanic peoples, where it had reached its most mature realization.

Fétis seems to have understood *tonalité* as the musical analogue to Hegel's world spirit. It appears as an "absolute idea" that unfolds over history in self-actualization in the musics of different peoples; it is a *telos* toward which music history directs itself, and all particular instances in history can be seen as but incomplete manifestations striving toward fulfillment. For Fétis, the end point seems to be the mature tonal practice of Western composers, a practice codified (or "objectified") in his own treatise on harmony. Fétis parsed this development into four distinct periods (or "orders") that he called (using English transliterations) *unitonic*, *transitonic*, *pluritonic*, and *omnitonic*. Each period was characterized by the degree to which musicians impose and exploit appellative tendencies. Using this as the ideal that has

guided all musicians, it is possible to interpret Fétis's narrative of Western tonality through Hegel's philosophy of history.

In the roughly eight-hundred-year penumbra of *unitonic* music, musicians failed to take advantage of the attractive forces that could be heard within (or more accurately, imposed on) the tendency tones of the diatonic gamut. Only gradually did musicians learn to develop a sensitivity to harmony. The introduction of the major third by English composers and the decline of improvising parallel perfect consonances in the "barbarous" practice of organum were both important steps in the cultivation of a tonal sensibility. Still, in the diatonic wash of plainchant tonality, relations between tones were "without tendency, without attraction." This precluded the establishment of any pitch hierarchy, let alone the possibility of modulation (*Traité*, 160). A sentiment of repose is projected in all harmonic successions, while dissonance arises artificially as the "prolongation" (suspension) of consonant intervals (*Ibid.*, xxxvii).

Of course, as we have seen, Fétis believed this was appropriate to the spiritual needs of the Church, and it gave birth to the great masterpieces of liturgical choral music by Palestrina and his contemporaries. But it also was incapable of expressing more passionate emotions. To resist the "rigorous despotism" of the *unitonic* system, some composers in the sixteenth century innovated with counterpoint, rhythm, and genre. A few, such as Vicentino and Gesualdo, attempted experiments with extreme chromaticism and enharmonicism. They only ended up, though, succumbing to mannerism, indicating that the musical resources of plainchant tonality were exhausted.

Towards the end of the sixteenth century, many composers of merit instinctively understood that the reign of unitonic music was completed, and that after Palestrina, there remained nothing more to do in its domain. (*Traité*, 164; *Treatise*, 162)

History thus demanded someone to step forward and help nudge music to a new tonal level. This "world-historical figure" as Hegel might have called him, was to be Monteverdi. Here was an artist "predestined" to contribute to "the complete transformation of music" more than any other; his revolutionary harmonic language inaugurated modern tonality even though it was a change of which "he himself was probably unaware" (*BU*<sup>2</sup>, 6:184).

And what was Monteverdi's epochal discovery? It was simply—but profoundly—that a dissonant harmony could exist independently of any contrapuntal preparation to define a given key. More specifically, it was the har-

mony of the “minor fifth”—the notorious “diabolus in musica”—that was used by Monteverdi as an unprepared interval. Fétis did not even shy away from telling us exactly where and when this brilliant intuition of Monteverdi’s was first made sonically manifest: it was in his fifth book of madrigals, published “around 1590.”<sup>56</sup> By utilizing this interval without any preparation, then, Monteverdi was able to open up with one bold stroke vast new possibilities for composers that would eventually be consolidated within our modern system of harmonic tonality.

As we saw earlier, Fétis was not the first one to honor Monteverdi as the founder of modern tonality. Two decades earlier, Choron had done that service. But evidently it was only in 1831 under the shade of a tree in the Bois de Bologne that Fétis was able to understand Monteverdi’s epic discovery as one moment—albeit perhaps the most crucial moment—in the grand evolution of musical tonality over the whole expanse of Western history.

With the dominant seventh chord now unleashed as a chord that could be used by composers without preparation, the stage was set for the flourishing of dramatic genres in the seventeenth century that would change musical style decisively. For the dominant seventh chord allowed composers to construct larger periodic phrase groups delineated through cadential articulation and to establish and move between other scales through modulation, thereby expressing the most dramatic and intense of passions necessary for the new dramatic genres then being cultivated (*Traité*, xliii). This fertile discovery led to the rich repertoire of chromatic *transitonic* music that characterized music—and especially operatic music—until well into the eighteenth century. Fétis called this *transitonic* because the chord progression of a dominant seventh to a tonic triad entails “an element of transition.”<sup>57</sup>

Having become aware of the attractive power of the dominant seventh chord—or the “minor” fifth, to be precise—musicians eventually began to recognize and exploit analogous appellative qualities within the minor mode using the diminished seventh chord and augmented sixth chord. (Fétis credited Mozart as being the first to do so; *Traité*, 177.) This was a logical evolution in his system given that both these harmonies could be analyzed as varieties of the dominant seventh chord altered through “substitution” and enharmonicism, respectively. By means of enharmonic respellings, either of these two chords could project a plurality of appellative tendencies and thus resolve to differing keys. This enrichment of modulatory resources thus inaugurated the period of *pluritonic* music—one which was largely in effect as Fétis was writing and fully in accord with the needs and sensibilities of his time (*Traité*, 153).

Because tonal history could be seen as a gradual process by which com-

posers came to recognize and exploit increasing amounts of *affinité* within their harmonies and scales, it was easy for Fétis to predict the next stage of tonality: the *omnitonic* order. At this final stage, appellative relations would be increasingly multiplied through the process of enharmonic respelling, chromatic substitution, and prolongation. Indeed, Fétis suggested that a few composers, such as Rossini and Berlioz, had already trodden this path in some of their music. A few other composers, however, possessed by an “insatiable desire for modulation,” had taken them to dangerous and even irreversible extremes. Through the saturation of the musical texture with these “transcendent enharmonies,” a superabundance of competing affinities is created, leading, as one observer put it, to a kind of “tonal vertigo.”<sup>58</sup>

The *omnitonic* order allows the composer unprecedented freedom to connect all keys equally, but it also has the effect of ultimately enfeebling such gravitational tendencies. At the later stages of *omnitonic* music, affinities within the scale become enervated, and tonality has no place further to develop, at least within the Western diatonic scale. Thus, the evolution of musical art will have come to an end. For Fétis, the change is an ignoble one, leading as it does to an almost hedonistic orgy of enharmonic and modulatory passages. (It is no wonder that he viewed the music of Berlioz, and later Wagner, with such alarm and disdain.) Of course, the evolution is natural, and in judicious amounts, *omnitonic* music might even be deeply affective. But it is ultimately a self-negating process in regard to art.

No doubt it was the destiny of harmony to attain the final limits of these tendencies and to realize all that is possible in it and through it. But there is also no doubt that the frequent use of multiple tonal attractions has the serious drawback of incessantly agitating the nervous emotions, and by depriving music of its simple character and purity of idea in order to transform it into a sensual art. (*Traité*, 200; *Treatise*, 194; translation modified)

Clearly, Fétis was convinced that modern tonality had already reached its maturity in the *transitonic* and *pluritonic* orders. Only in this music was a *juste milieu* struck between the internal stability of the diatonic scale and the external tension brought on through chromaticism and modulation.

Now, all this may seem to be a paradoxical thing for Fétis to say. We have seen earlier how he believed tonality to have varied widely over time and place. It was a free decision of the autonomous mind, not a predetermined product of nature; it was the intellect’s selection of pitch material and the will’s imposition of attractive forces on those pitches that constituted a tonality. If tonality changed over time, this was supposed to be seen as



“transformation,” not “progress.” So how could Fétis then posit an evolution of musical tonality that did indeed seem to be directed by historical necessity let alone one that progressed in distinct and predictable phases leading to his own day? How could he be so relentless in his criticisms of past composers and theorists for their ignorance of or insensitivity to the “needs of tonality” while at the same time claiming that every tonality was what it should be since it reflects the needs and character of the people who utilize it? In short, how can the choice of a tonality be both free and necessary?

Fétis seemed to have anticipated just this question:

I can imagine the objection that one might use against me. If human freedom, one will say, is as absolute as you claim it is to conceive [differing] systems of tonal relationships, how can it be that we do not find more regularity in the diatonic scale, in which one uses only equal intervals instead of the mixture of whole steps and semitones that we actually find and about which we do not even know the cause? If I am not mistaken, this argument, rather than confuting the free exercise of human faculties in the conception of those laws that regulate the relation of tones, in fact provides me with precisely the means to demonstrate its absolute liberty. (*Traité*, xxv; *Treatise*, lxii; translation modified)

And what is the nature of this “absolute liberty”? It is nothing less than the reification of historical necessity within the realm of human freedom actualizing over time. To understand the nature of this seeming paradox, again we must return briefly to German idealist philosophy.

One of the primary challenges the idealists faced was precisely this reconciliation of freedom and necessity: the will of the individual versus the laws of history. According to the tenets of classical idealism, man is both free and bonded. He is free to choose; yet there are greater rational forces that determine history to which an individual must submit. What is the nature of these dominating historical forces? For Fichte, it is Kantian ethics—it is man’s responsibility (or “vocation”) to recognize and submit to a moral absolute. This is done by a “lawful will” that mediates the material world and our free reason. Schelling suggested an ontological solution by sublimating the individual spirit within the natural world, thereby creating an absolute identity of consciousness. As historical characters, human beings can no more disobey the laws and needs of history than the natural world can violate the laws of nature, since both are manifestations of the same spirit: nature is the spatial realization of spirit, while history is its temporal actualization. His-

tory thus became a process of emerging consciousness (or as he termed it, "the self-evolution of the absolute").<sup>59</sup>

In a somewhat analogous manner, Hegel viewed the sublimation of individual will within the objective laws of immanent necessity as the spirit of emerging self-consciousness, but he cast the argument as more a logical problem than did Schelling.<sup>60</sup> For Hegel, history was a fully rational process of the "world spirit" driven by the relentless and inescapable logic of dialectical law and made manifest in man's becoming increasingly aware of his own freedom. This is of course not freedom in any political sense—rather, in the sense of one's self-consciousness. Hegel would not deny that history is made up of individuals who have their own egos and wills. But, Hegel argued, a higher, collective "absolute" rationality guides the development of humanity, one that directs history according to its own needs, and culminates in the power of the state. Few individuals ever are aware of these forces. We are in a sense all pawns in the game of historical evolution, including even those who by their actions seem autonomously to have caused change in the course of history. Such "world-historical figures" (of whom Napoleon was a paradigmatic example for Hegel, and as we have seen, Monteverdi was for Fétis) ultimately can be seen as carrying out historically necessary tasks for which they have no control. It is not a question, then, of resisting the rational needs of history but of recognizing them and becoming conscious of them. It is perhaps true that there are "objective" laws or "external stimuli" (as Hegel would say) of a material, social, or biological nature that pull on us. But these are ultimately sublimated within the "absolute" world spirit that transcends any objective constraint.

Tonality was such an ideal, almost gnostic, impulse in Fétis's view, one that could be traced in all cultures and historical periods of music. It is a restless force that moves through time, revealing itself through the agents of musicians in a continual process of self-actualization. It is true that societies and cultures cannot participate uniformly in this actualization of the tonal ideal. Just as Hegel's world spirit moved selectively from one culture to another, the unfolding of tonality was equally a selective process. Still, each stage of evolution is a necessary one in the cosmic plan of unfolding tonal consciousness just as each state, each political institution must be just what it is at a given historical moment.

There was thus never unmitigated (necessary) freedom of choice among musicians as concerned the musical tonality they utilized. Tonality could not develop in any other way than it did, and individual musicians and cultures are merely unwilling agents in the process. The "absolute freedom" to

which Fétis refers may be a liberation from materialistic determination and fatalism. But it is no liberation from historical necessity—in this case, the full realization of tonality.<sup>61</sup>

One final point needs to be emphasized. For Fétis, the evolution of tonal music is one in which theorists play a role as critical as composers in that it is they who give self-consciousness to those historical forces that guide the development of music. It is not enough, in other words, that tonality be intuited by composers. It is vital that it be recognized and explicated, given a rational voice, as it were.<sup>62</sup>

Much as Hegel celebrated those philosophical savants who since Heraclitus caught glimpses of the truth of dialectical logic, and in a sense became vessels of this historical self-consciousness, Fétis offered his own (more modest) pantheon of music-theoretical sages who adumbrated aspects of *tonalité*. Beginning with the positive insights of theorists such as Marchetto and Zarlino and continuing through selected passages of Rameau, Sorge, Schröter, Kirnberger, Catel, and Choron, Fétis found evidence of an emerging tonal consciousness scrolling across history, one that of course had culminated in his own theoretical formulations.<sup>63</sup> It is the noble task of the music theorist to be the oracle who elucidates features of music's tonality and the historical laws that guide its evolution. Just as the idealists hoped to show how nature and history were manifestations of the same ideal absolute, Fétis saw the task of his self-proclaimed science of the "philosophie de la musique" to show how tonality was the dialectal synthesis of theory and history; music history was the actualization of tonality, while music theory could be seen as its "objectification."

Here, then, was the gripping story of tonality's history and eventual fate that Fétis laid out for his rapt audience in his lectures from 1844. We will have ample time to subject just about every one of his claims to closer scrutiny in subsequent chapters of this book. For now, it is enough to see how Fétis attempted to sketch out a truly grand theory of music, one that explained not only why the music of today sounds as it does but how it got to this point and, most audaciously, where it was going. Never before had anyone dared to propose such a totalizing, tendentiously historical perspective of music theory. Rather than looking toward timeless principles in natural science, Pythagorean numerology, or the like, Fétis grounded harmonic theory in the temporal flow of history. All theories of harmony past and present—including his own—were to be understood as the result of a continuous and rational evolution that precluded the flattening out of history so as to afford any discrete analytic comparison. At the same time, though, we could also

say that no one ever viewed music history more theoretically than did Fétis. That is, history was to be understood not as a mere chronology of events and documents that the historian cobbles into a narrative; it was rather an ideal process unfolding rationally according to universal laws, which it was the task of the historian to identify and elucidate. And this apposition of theory with history was one dialectically synthesized within his encompassing theory of *tonalité*. We can well understand why his lectures generated such an enthusiastic response and won him so much desirable publicity for his forthcoming treatise of harmony. Never one to suffer from immodesty and shy away from self-promotion, Fétis boasted in 1835

I have discovered the true foundations of the art and science of music, or in a word, the *philosophy of music* whose necessity has been recognized for some time now but whose principles seemed to have been an impenetrable mystery. . . . I have had the good luck of discovering the eternal basis not only of the music of our own day but of all music that is possible. Only then was I able to understand the laws of all systems of music that have little by little directed the various paths this art has taken. The point of contact between these systems, the causes of their difference, their successive transformations, the necessity of a certain order in the means by which these transformations take place, all this appeared to me through the true perspective by which one must view them. The merits and errors of all theories, of all methods, was revealed to me, and the history of all the revolutions of music appeared to me as but the necessary result of some fecund principles acting inexorably on those [musicians] unaware of the forces by which they were directed. (*BU*<sup>1</sup>, 1:xxix)

Over the following decades, Fétis continued to promote his theory of tonality with ever-increasing energy, and, let it be said, overconfidence. (There is a striking similarity with Rameau's devotion to his beloved *corps sonore*, which toward the end of his life assumed ever-greater metaphysical importance in his theory and rhetoric.) This is not to say that Fétis's theory of tonality remained thereafter fixed. Over the quarter century that followed these lectures, Fétis found his concept of *tonalité* subjected to increasing criticism as both a theoretical and a historical principle. As new ideas and evidence from differing sources came to Fétis's attention, he was prompted to modify his claims in often significant ways. (Once again, we may think of Rameau, whose theory of harmony similarly took a number of sharp turns over his lifetime as new ideas were brought to his attention.)

We will follow many of these later writings and developments in subse-

quent chapters. For now, though, we will see that in the waning days of the July Monarchy, it was Fétis's own work that was exerting the pressure. No other theory of music seemed as powerfully compelling in its ability to account for such a range of empirical musical phenomena, so bold in its claim to explain the history, present state, and future of music from around the globe. It is no wonder that his theory of *tonalité* assumed a central place in musical discourse. Not since the time of Rameau—*encore une fois*—had the writings of a music theorist entered so conspicuously into the public sphere. Fétis's concept of tonality became a key notion by which musicians, critics, scholars, composers, and a growing public of informed listeners began to attend to, identify, and distinguish the ever-increasing diversity of music that was beginning to be heard in European capitals toward the middle of the nineteenth century. Appropriately enough, the first significant indication of this influence was to be seen in the arguments over a repertoire of music in which the whole question of tonality first emerged many decades earlier in Choron's writings: the repertoire of medieval sacred plainchant.

## Chant

We tend today to associate the Gregorian chant reform movement in the nineteenth century almost exclusively with a small group of Benedictine monks from the Abbey of Solesmes. Beginning with their first publications in the 1860s, a number of these monks led by the indefatigable Dom Guéranger undertook a program of chant restoration that completely transformed the way Roman chant was sung, especially in regard to its phrasing and rhythmic delivery.<sup>1</sup> As part of their project, the Solesmes monks also began issuing editions of chant that better reflected both their practical and aesthetic goals. Eventually their work received the official imprimatur of Pope Pius X in 1903 with the issuance of the bull *Motu Proprio*, thus becoming the standard model by which chant is taught and sung today.<sup>2</sup>

Yet what is perhaps less well known about this oft-told story is that the Solesmes reforms were really the culmination of a movement in France and Belgium that preceded them by several generations.<sup>3</sup> Moreover, many of the early nineteenth-century chant reformers were motivated by questions beyond that of rhythmic delivery (although that was, to be sure, always a critical issue). Another concern, as we will see in this chapter, revolved around the problem of *tonalité* and specifically of how plainchant tonality differed from that of modern tonality.

As with any discussion of tonality in France at this time, the theories of Fétis loomed ever in the background. To a degree that I believe has not been sufficiently recognized by historians, the story of chant reform in the nineteenth century was closely entangled with—and to some degree was catalyzed by—the theoretical and historical debates generated by Fétis's theory of *tonalité*.<sup>4</sup> At the same time, the theory of *tonalité* itself was developed by Fétis and his contemporaries with the repertoire of Gregorian chant as a major object of concern.



The nineteenth century was not the first period in church history in which we hear calls for the reform of chant. Since the time of Charlemagne in the eighth century, church authorities have in almost periodic waves attempted to unify and regulate chant practice, purging it of repertoire or practices that were deemed spurious or harmful to the aims of the church. Yet by the turn of the nineteenth century, it had become clear to many of the faithful in France that the liturgical song of the Catholic Church had taken a particularly bad turn at some point. Many were quick to blame the fall on the secularism of the Enlightenment and the ensuing carnage wrought by the Revolution. Others traced the problem further back to the Counter-Reformation and the various “reforms” inaugurated by the Council of Trent in the sixteenth century. Still others blamed the frivolous tastes and dandyism so rampant in the latter years of the Restoration and the July Monarchy. Whatever the causes, there were many things to complain about in regard to the singing of Gregorian chant at the time.

Choron was not slow to point his finger in multiple directions, at “ignorant men without taste,” at the “poor instructors of chant,” and above all, at the majority of French bishops who in recent times had sought to “reform” chant only by substituting for it “the most pitiful, tedious and insipid melodies that were hardly worthy of the venerable genre of church music.”<sup>5</sup>

Fétis also found no lack of culprits to vilify. Chant practice, he lamented in 1843, had been “disfigured by the faults of copyists” as well as “by a thousand capricious traditions.” He expressed particular irritation at the ignorance of most singers, for “their insouciance, the impetuosity of their delivery, and their vocal incompetence.”<sup>6</sup> But how could it be otherwise? Virtually all of the *maîtrises* in which church music was taught before the Revolution were now closed or in a desperate state. Matters were not helped by organists who would botch accompaniments and could scarcely play a single *verset* in tempo. And then there were the *maîtres de musique* who would introduce secular music into the service. An infamous case from 1833 reported by one writer concerned a pastiche of some Rossini opera arias heard in the church of Saint Roch in Paris in which the text of the Credo was substituted for the original Italian lyrics as a contrafactum.<sup>7</sup> Worse still, there were those “barbaric” instruments used to accompany chant performance such as the ophicleide and serpent.<sup>8</sup>

And the complaints kept coming. Jean-Louis-Félix Danjou, an organist from Belgium then employed at Saint-Eustache in Paris, grumbled in 1844 that most written chant editions are but “a tissue of ignorance and contra-

dictions" displaying "execrable taste."<sup>9</sup> Clerics from the northern dioceses of Reims and Cambrai lamented the "fatal decadence" into which chant singing had fallen, comparing the "skeleton" of contemporary chant to the authentic "living body" of Gregorian melody as sung in the past "that breaths beauty and life."<sup>10</sup> But change would come slowly. In a survey of chant editions produced over the previous two centuries, the Abbé Cloet came to the sad conclusion in 1862 that "modern editions of chant no longer possess the naive purity found in the days of Saint Gregory but are instead a vestige of the ancient chant that has been more or less transformed in substance and above all in form."<sup>11</sup>

As critics worried about the ill health of chant practice, one underlying source of infection slowly began to come into focus: tonality, or more accurately, *tonalité moderne*. Too many church musicians, it seemed, had little understanding of the historical modes within which the chant repertoire was originally organized and instead translated the historic melodies into modern keys. It was no wonder that so much church music sounded like it came from the salon or stage.

One of the first to sound this alarm, not surprisingly, was Alexandre Choron. Already in 1811 he diagnosed the problem: most of the editions of chant used by singers, he scolded, mixed "modern" modes with the older, authentic "primordial" modes. The result was the "horrible mutilation" of the greatest number of chants.<sup>12</sup> We recall from chapter 1 that it was through his study of music history that Choron first articulated his distinction between *tonalité ecclésiastique* and *tonalité moderne*. Today, he noted sadly, this distinction is lost. Musicians no longer had any knowledge, let alone true understanding, of "modulation" (using the term in its most authentic, historical sense).<sup>13</sup> If musicians were to rescue church music from the rubble of the Revolution, he counseled, they would have to learn anew the language of the ancient tonality.

Fétis agreed that ignorance of the "règles de la tonalité" by singers—and he meant, naturally, of the *ancient tonality*—was a major cause for the decadence of current chant singing.<sup>14</sup> Without such an understanding, it was natural that modern tonality would slowly "annihilate" (*anéant*) the ecclesiastical modes. Again and again, distressed clerics voiced their alarm about the lethal effects of modern tonality seeping into the sacred chant repertoire of the church. Joseph d'Ortigue was typically blunt in laying the blame for this distressing state: "LA TONALITÉ MODERNE A TUÉ LA TONALITÉ DU PLAIN-CHANT" he cried out through hyperventilating uppercase typography in one of the articles he wrote for a dictionary of liturgical chant—modern tonality has murdered the tonality of plainchant.<sup>15</sup>



Example 2.1. Two chant exercises with accidentals from d'Ortigue, *Abécédaire du plain-chant*, 52, 60.

D'Ortigue must have said this with some guilt. In example 2.1, we can see two short exercises from a chant tutor that he had authored over a decade earlier. There we see an eighth-mode Hymn for Corpus Christi ("O Salutaris") and a transposed second-mode Easter Introit. In both excerpts, d'Ortigue added sharps that clearly imply leading tones in the keys of G major and A minor, respectively. (Note, too, that both chants were sung with fixed rhythmic pacing, as we can see by the square notations.) We'll be hearing much more from d'Ortigue shortly. For now, I would simply note that he clearly had a change of mind in the years following the publication of his little tutor.

We might dismiss d'Ortigue's editing in example 2.1 as an anomaly were the same tendency to inflect chants with updated accidentals not also to be found in many graduals and antiphonaries of the time.<sup>16</sup> Consider example 2.2 from an antiphony published in Belgium in 1835. Here we see a well-known antiphon in the second mode ("Miserator Dominus") transposed to A with numerous leading tones embellishing the *finalis*.<sup>17</sup>

But undoubtedly the most obvious and egregious examples of modern tonality infecting the singing and practice of chant in the century can be seen in the many organ accompaniments that were written out and prescribed by pedagogues. Adolph Jacques Claude Miné, an organist at Saint-Roch, was one of the most prolific composers of such organ accompaniments. The au-

TONI  
RANSP.

Ant. Mi se ra tor Do- minus es cam de dit timen-  
ti bus se in me mo riam su o rum mira- bi-  
li um. Ps. Confi tebor ti bi, Domine, in toto corde me-  
o, in consi li o justorum et congrega ti- one. Pag. 393.

Example 2.2. The antiphon "Miserator Dominus" from *Vesperale seu antiphonale romanum juxta breviarium* (Gandae: Vanryckegem, 1835), 189.

thor of a large number of method books and organ music (including even one for those who cannot read music!), he produced ready-to-use accompaniments for novice organists whose harmonic syntax no one would confuse with medieval modality. A typical accompaniment is shown in example 2.3, drawn from a large collection of harmonizations he published in 1845, in this case, for the famous Easter gradual "Haec dies."<sup>18</sup>

There is no mistaking the tonality here. The harmonization Miné writes out for the organist (or pianist!) to play consists of obviously full-blooded functional harmonies (virtually all in root position) in the keys of C major and A minor, each confirmed with a full authentic cadence using an unprepared dominant seventh chord. The continually circulating B $\flat$ s that Miné also employs here are complete fabrications on his part and obvious concessions to modern tonal tastes. Given this setting, and many, many more like it in this published collection, we might well be inclined to believe the story that Saint Roch could indeed be the place where Rossini's arias were appropriated for services.

Quite clearly, then, modern tonality seemed everywhere to have infected the chant repertoire of the church. Drastic action would be needed to recover the ancient and now-forgotten tonality of plainchant. How to do this? For Fétis, the answer seemed obvious: paleography and scholarship. We must return to the historical sources of chant, carefully comparing the original medieval manuscripts that have survived as well as studying any coterminous theoretical literature in order to help us understand and resuscitate the

4

du 2. A. *Intonation.* *Chœur.*

GRADUEL.

Chant.  
Orgue  
ou  
Piano.

Haec di - - es, quam fe - cit  
Do - - mi - nus, e - vol - te - - -  
- nus et la - te - mur in e - - a.

c. c. 4205

Example 2.3. Accompaniment for the opening of “Haec dies” from Miné, *L’organiste accompagnateur*, 4. Courtesy of the Bibliothèque nationale, Paris.

ancient practice of chant. Danjou seconded Fétis’s call to his compatriots to join in the noble and holy project of chant “archéologie,” as they called it. He even founded a journal in 1845 with the precise aim of encouraging and propagating the latest and most reliable scholarly findings regarding chant.<sup>19</sup>

Over the following decades, Fétis, Danjou, and a small troop of able colleagues took up this task with redoubtable zeal, traveling to monasteries, cathedral archives, and municipal libraries around Europe searching for chant manuscripts that they could transcribe and compare. Danjou was one of the first to hit pay dirt, “discovering” a fantastic antiphony in Montpellier in 1846—Mo-H 159, as it is known today by its library siglum.<sup>20</sup> With its double notations of letters and neumes, Danjou thought it to be the “Rosetta stone” of medieval music that would help scholars unlock the secrets of neumatic notation. (We’ll hear more about this manuscript shortly.) At the same time, many of our musicological pioneers began to study ancient theory manuscripts that would throw light on the medieval modal system. In quick succession, music journals like Danjou’s became filled with learned articles on problems of deciphering neumatic notations, issues of chant modality and metrics, and recommendations for performance. At the same time, dozens upon dozens of pedagogical treatises, practical manuals, polemical pamphlets, and other *imprimés* on chant singing appeared in France and Belgium

between 1840 and 1860, each claiming to be based on the latest historical evidence. New schools of church singing were established, and competing editions of graduals and antiphonaries were issued, all claiming to restore chant to its original tonality. If this first generation of scholars by no means resolved all the outstanding questions regarding chant scholarship and practice, they certainly laid the foundation on which the Solesmes reforms could be built over the second half of the nineteenth century. Within this first wave of chant reform, one can see the modern discipline of historical musicology slowly coming into recognizable form.<sup>21</sup>

But we are getting ahead of our story. In the 1840s, there was still much work to be done. Where was one to begin the daunting process of salvaging chant from the ravages of the present?

### RAISED PERILS

Perhaps one place might be those infernal chromatics that had crept into chant practice, or more specifically, those sharps (*notes diézées*) that seemed to imply the functional leading tone of modern tonality, examples of which we have observed in each of the examples cited above. It is hardly a surprise that Danjou would single out this practice, for Fétis had now made musicians acutely aware of how potent this tonal accent was as a force in modern music. There was no other aspect of chant performance, Danjou believed, that was more indicative of the corruption of chant than the incursion of a raised leading tone, a practice that “accommodates plainchant to modern tonality” and thereby “denatures it completely.”<sup>22</sup>

But the alarm had already been sounded well before Danjou came on the scene. In 1825, a cleric from Brittany by the name of Joseph Mahé was railing against the addition of accidentals to sacred chant by ignorant singers. In a remarkably comprehensive study of the history and antiquities of his native province, he included a chapter at the end on the tonality of local popular music and dance.<sup>23</sup> We will revisit this pioneering study in chapter 4. For now, I will just point out that in discussing the tonal corruption he had observed creeping into so much of his native Breton folk music, he paused to lament how the sacred song of the church had also become abused by modern tastes, particularly by the application of a leading tone (*corde sensible*) in many chants. Clearly inspired by Choron’s scholarship, père Mahé reminded his readers that the seventh scale degree (the *sous-tonique*) must never be raised. “And if any organists, serpentists, or singers sound the leading tone, they are violating the rules, and instead of demonstrating their good taste, they reveal their limited knowledge of theory” (Mahé, 367). No single note,



Figure 2.1. Photograph of Father Joseph Mahé (1760–1831) playing the serpent.

he warned darkly, was more detrimental, more unsettling to the pious sentiment of chant than this “pretentious and affected” (*minaudière*) leading tone (369).

We can hear similar rhetoric over the following decades. In one publication, we read that the use of any sharp in a chant will inevitably destroy “the distinctive character of the modes.”<sup>24</sup> For another anonymous writer, the whole notion of a sharp in Gregorian chant was “nonsensical.” Its imposition can only “destroy the proper tonality of Gregorian chant and assimilate it within modern tonality.”<sup>25</sup> A Dutch cleric echoed these views, finding the practice a most deplorable “abuse,” indeed a “revolting vandalism.”<sup>26</sup>

Some suggested pathological metaphors: the raised leading tone was a contagion infecting the very health of ancient tonality. One worried cleric wrote that it “is absolutely foreign to the tonality of plainchant.”<sup>27</sup> For the editors of the Reims-Cambrai edition (an edition that was based on the Montpellier antiphony found by Danjou), the introduction of *notes sensibles*

into the body of chant “denatured” the music of its “primitive beauty” and simplicity.<sup>28</sup> Most commonly, though, writers invoked rhetoric that originated with Fétis, referring disapprovingly to the stimulating effect of the raised semitone, an accent projecting something inappropriately sensual or overly piquant for use in church; it pricked the diatonic surface of chant and aroused a sense of expectation—perhaps even desire—that made it ideal for the worldly qualities of secular music but dangerous and seductive in the realm of church music.

Now the tradition of aligning church music with diatonicism and secular music with chromaticism is an old one that can be traced back at least to the sixteenth century. Chromaticism has a long and seemingly ineradicable association with stimulating, sensual affections that make its presence in sacred music discomforting for many listeners. It is no wonder that a single, innocuous leading tone could raise such alarm among many church musicians.

Danjou describes in some detail just how such chromaticism could be so disruptive to religious decorum in a discussion of the famous “Moses prayer” (“Dal tuo stellato soglio”) drawn from Rossini’s “sacred opera” *Mosè in Egitto* that was given a (heavily revised) French premier in 1827 under the title *Moïse et Pharaon, ou le passage de la Mer Rouge*. Obviously, this is music that is manifestly written in a modern tonality. Still, it provides a good example of how sensitized the ears of many church musicians were to the effects of even the tiniest bit of chromaticism within the context of a piece of religious music that ostensibly offers a moment of contemplative prayer and repose in the opera. The excerpt in question—here translated as “Des cieux où tu resides grand Dieu toi qui nous guides”—is reproduced in example 2.4. Danjou is concerned about the accented appoggiatura on C# that we hear at the beginning of the second system in this excerpt over the first-inversion dominant harmony.

This note belongs to the chromatic genre; it is an indication of at least transitory modulation; the ear is affected in a sensible manner and calls for (*appelle*) the resolution to ré. The sense of this attraction of c# to d derives its propriety from modern tonality. The musical effect destroys the calm of the melody, injecting a reflex of passion and expression that is repellent to the majesty of religious sentiment. It is, in a word, sensualist.

Danjou ends with this emphatic condemnation: “Ce n’est pas de l’art catholique” (This is not Catholic art).<sup>29</sup>

The image shows a page of a musical score for the opera *Moïse* by Rossini. The title "MOÏSE." is written above the first staff. The score is in bass clef with a key signature of one flat. It consists of two systems. The first system has a vocal line with the lyrics "Des cieux où tu ré-" and a piano accompaniment. The piano part includes dynamic markings like "pp" and "tr". The second system has a vocal line with the lyrics "- si- des grand Dieu toi qui nous gui- des com-" and a piano accompaniment. The piano part includes dynamic markings like "tr" and "V".

Example 2.4. "Moses Prayer," opening phrase. Rossini, *Moïse: Opéra en quatre actes*. *Musique de G. Rossini. Partition Piano et Chant*, 304. Courtesy of the Library Conservatoire royal—Koninklijk Conservatorium, Brussels.

Hiding behind all this prudish rhetoric was an anxiety that one might be tempted today to diagnose as sexual insecurity. For again and again, musicians such as Danjou imputed stimulating tendencies to the leading tone that could easily be read as indecorous, not to say even lascivious, in the church.<sup>30</sup> In the following remark by Dom André Mocquereau, the principal leader of the Solesmes school in the later nineteenth century, we can easily detect rhetoric of carnal asceticism with all his anxious references to a "fallen world" of nerves and passions. Chant, he tells us,

borrows nothing, or the least possible, from the world of the senses. If it passes through them it does so without tarrying to parley, for it has nothing to say to the passions or the imagination. . . . It remains always wholesome and serene, it does not act on the nervous system nor seek to waken a response in that fallen world of which it refuses to make the least use.<sup>31</sup>

And the cause for such unwholesome nervous stimulation in modern tonality, Dom Mocquereau adds, can be attributed almost entirely to the use of dominant seventh chords and their attendant semitonal attractions. The key to warding off any possible arousal of worldly passions in the singing of chant thus lay in strict modal fidelity:

With its frank tonality and entire absence of chromatic progressions, expressing incomplete notions by semitones, [Gregorian chant] seems incapable of representing anything short of perfect beauty, pure truth. The ear which has once become attuned to its wonderful freshness can no longer bear to listen to those soft airs which infect with a surge of sensualism even the very music which is meant to be an expression of heavenly love. There is something angelic in the rigidity of the plainsong scale, impervious to the least shadow of alteration. (Sunol, 39)

Clearly, these chromatic accidentals had no place in true chant practice.

### FÉTIS PUSHES BACK

Or did they? It was not that the *leading tone* was unknown in chant practice, after all, where it was regularly heard in all *tritus* modes (E–F). And then there was evidence that semitone alterations might sometimes be introduced into polyphonic music through the invocation of *musica ficta*. But the degree to which such alterations could be sanctioned remained a point of severe contestation among scholars in the nineteenth century (and beyond, for that matter).

It is telling that the question of the semitone in chant was the subject of the very first article in Danjou's new journal, and the author of the article was none other than Fétis.<sup>32</sup> What better way was there to establish the scholarly credentials of his publication than by enlisting "this illustrious scholar" as its first contributor, and one who had just recently produced his own manual of chant practice.<sup>33</sup> But Fétis's argument may not have been what Danjou was expecting. For Fétis by no means was ready to join the clerics seeking to strip the altars of Roman chant of all chromaticism and other tonal contaminants in order to return it to its pure, modal virginity.

Danjou should probably have known better. Already in an 1841 publication for church organists, Fétis had written out model harmonizations that demonstrated he was by no means resistant to the employment of modern tonality in the service of chant accompaniment. To be sure, he rejected the various melodic flourishes that many Parisian organists added with their right hand to their accompaniments and *versets*, as well as the highly chromatic harmonizations typical of German organists. But in the psalm accompaniment illustrated in example 2.5, a style that Fétis called "Faux Bourdon," we still see the unmistakable markers of modern tonality, including two authentic cadences employing dominant seventh chords.<sup>34</sup> The harmonization differs little in syntax from the one we saw in example 2.3 by Miné. We may



Ce caractère d'accompagnement qui est celui des faux Bourdons, est le seul qui convient à l'Eglise.

Example 2.5. Opening of Psalm 95, "Venite exultemus Domino" in a "Faux Bourdon" manner of chant accompaniment from Fétis, *Six messes faciles*, 9.

thus be perplexed to read Fétis insisting in his preface that this kind of accompaniment was "the only one appropriate for the church."

But he meant what he wrote. Indeed, Fétis doubled down on this kind of accompaniment in a manual that he published two years later, the *Méthode élémentaire de plain-chant*. There, Fétis conceded that the kind of organ accompaniments he recommended used harmonies drawn from modern tonality, ones that also occasionally necessitated some chromatic alterations in the chant melody. Paradoxically, though, he argued that such concessions need not violate the spirit of the ancient tonality even as they are obvious nods to current tastes. He would thus offer to the organist "new guidelines . . . for the execution of accompaniment and modulation fusing the two tonalities, without altering at all the gravity of chant through too many unintended modulations."<sup>35</sup>

Fétis gave us an example of this tonal fusion, reproduced in example 2.6, where he prescribes a reading of the first-mode responsory for Corpus Christi, "Immolabit haedum." Not only does he indicate above the chant the keys in which each segment of the music might be harmonized in "our current tonality" by the organist (D minor, A minor, C major, F major, etc.), he inserts the leading tones of C# and G# directly into the chant to help confirm modulations to the minor keys. The process, he tells us in a footnote, is one that can be employed in the accompaniment of any chant of the four primary tones, at least as long as an alteration does not create a "false relation of a tritone or the minor fifth with any note that may precede or follow it."

We may well ask how Fétis could justify this alteration of semitones in the chant that seemed so obviously to contradict the evidence of manuscript sources. Why would he possibly countenance the introduction of harmonies clearly tethered to modern tonality to support melodies that he had long known to belong to a completely differing tonality? Didn't he hear how these

**1<sup>re</sup> Répons des Matines de la Fête-Dieu (1<sup>er</sup> ton).**

Ré min.    la min.    ut.    Cadence préparée en fa.    ré min.    \*\*

Im-mo-la-bit hæ-dum multi-tu-do fi-li-o-

en fa.    ré min.    la min.

rum Is-ra-ël ad ves-pe-ram Pas-chæ: Et

ré min.    fa.    ré min.

e-dent car-nes, et a-zi-mos pa-

En fa.    la min.    dom.    ré min.

nes. Pas-cha nostrum immo-la-tus est Chri-stus:

Example 2.6. On the “application of modern harmony to plainchant,” from Fétis, *Méthode élémentaire de plain-chant*, 31.

harmonizations contributed to the general degradation of a chant practice about which so many of his colleagues were lamenting? And finally, wouldn't this mixture of tonalities fundamentally violate his claims about the differing—and incompatible—realms of ancient and modern tonality? While he avoided addressing these many questions directly in his *Méthode*, some answers would finally be offered in the article he wrote for Danjou's journal in 1845. And surprisingly, it turns out that the kinds of hybrid harmonizations Fétis had composed for his organ accompaniments had a historical basis—or so he claimed. His arguments are worth following with some care, as they will help us understand further some subtleties about his notions of historical tonality.

Fétis began his article by reminding the reader that “artificial” semitones did sometimes occur in the earliest chant practice. Theorists in the Middle Ages had a well-established means for altering a tone through the use of the *b-rotundum*. As early as Hucbald (*De harmonica institutione*, late ninth century), a note between the Greek *mese* and *paramese* (A and H) could be inserted (“a sound not among those previously given”) by virtue of the *synemmenon* tetrachord. The resulting note (a *trite synemmenon*) was later notated by the eleventh-century author of the *Dialogus de musica* (previously attributed to Odo of Cluny) as a rounded b (versus the “square b”—

*b-quadratum*). Guido solfeged this semitone as mi-fa within the “soft” hexachord beginning on F. This meant there were now three places in his gamut for sounding the semitone in medieval chant theory: B–C, E–F, and A–B $\flat$ . If a chant had an unusual intervallic structure that could not be accommodated by these canonical half steps in its assigned mode—such as the Easter gradual “Haec dies” or the communion “Beatus servus”—it would need to be transposed to another pitch level in order to conform to the standard tone system. Of course, this had the disadvantage of having the chant end on its cofinal or some other pitch level. But it was the only notation available that could accommodate these semitones.

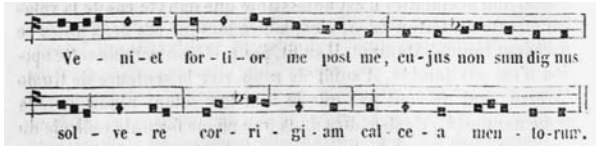
The real question that concerned Fétis was not transposition, though. It was the question of *musique feinte*, as “musica ficta” was translated in French. Under what conditions could a singer raise or lower a given pitch by a semitone in a chant melody through the imposition of a sharp or flat, thus creating a “false” note that could not be found on the “true” Guidonian gamut (*musica vera*)? A second, closely related question was whether such alterations should be notated by editors in their editions of chant.

Some scholars believed that there was historical evidence for the practice of *musica ficta* in chant that could be found in the *Micrologus* of Guido. In chapter 8 of this work (on the “affinities”), Guido begins by explaining one of the reasons why an irregular B $\flat$  (“b vero rotundum”) might be needed in a chant in the first place. Since this text would be fundamental for the subsequent scholarly debate, it is worth quoting it here in full:

Moreover b-flat, which is less regular and which is called “added” or “soft,” has a concord with F, and is added because F cannot make a concord with a b natural a fourth away, since it is a tritone distant.<sup>36</sup>

The problem addressed by Guido concerns the interval of the *tritonus* formed between F and B $\sharp$  (*b-quadratum*). Because of the harsh quality of this interval, it was to be avoided as a melodic interval in chant as much as possible. This is why Guido alerts his readers that the B $\flat$  was frequently found in those chants “in which F or f recur rather extensively,” particularly in the third, “tritus” modes.

Fétis concluded on the basis of this passage that singers would instinctively wish to correct a chant whenever a contour would articulate a “minor fifth” (diminished fifth) or “major fourth” (tritone). Even if such alterations were not notated, singers would know to impose them in practice to avoid the offensive interval. He offers as an example a Magnificat in the fifth mode,



Example 2.7. Chromatic alterations in “Veniet fortior”  
from Fétis, “Du demi-ton dans le plain-chant,” 24.

“Veniet fortior” (see ex. 2.7). Although no early versions of this chant include a Bb, Fétis here notates it in two places where it is needed in order to avoid the F–B tritone that would otherwise be outlined (above the words “cujus non sum dignus solvere” and “cor-ri-giam calcea”).

But does Guido’s text actually sanction the kind of alterations Fétis advocates? Nowhere does Guido say that singers themselves are expected to lower (or raise, as the case may be) a given note of a chant in order to avoid any suggestion of the tritone. In fact, in chapter 10 of the *Micrologus*, Guido seems quite censorious of those singers who introduce “false notes” and thereby “deviate from well-tuned notes, lowering or raising them slightly . . . ascending or descending more than is right for the prescribed interval.” Such changes “pervert a melody of a certain mode into another mode.”<sup>37</sup>

And what of the possibility of raising a note by imposing a sharp? Here the evidence seemed even less secure. While a sharp offered the same possibility as the flat for altering a tone, the former was almost never used for this purpose in chant practice. (Only with the development of the theory of *conjunctae* in the later fourteenth century could the raised semitone find a theoretical justification in chant practice.<sup>38</sup>) Still, this did not stop Fétis and many of his contemporaries from adding sharps to their chant additions, believing such alterations were also sanctioned by the earliest chant practice, even if more for the sake of “causa pulchritudinis” than “causa necessitatis.” And there was one compelling theoretical source that seemed to confirm their view. It, too, apparently came from none other than Guido himself.

Toward the end of the tenth chapter of the *Micrologus* as recorded in Gerbert’s eighteenth-century edition (and we must remember that this was the only published edition of Guido available to scholars in the first half of the nineteenth century), there is a puzzling discussion of *subductio* that is defined as a diesis, that is, about one half of a semitone.<sup>39</sup> The text tells us that this *subductio* can often be applied to the “third” or “sixth” notes of the scale, which is to say C and F.<sup>40</sup> The *dieses* are thus found between C# and D and

between F $\sharp$  and G, respectively. A number of scholars in Fétis's circle took this passage to sanction the imposition of sharps in their chant readings, particularly for the protus (D) and tetrardus (G) modes.<sup>41</sup>

The whole discussion of *subductio* in Guido's text, however, makes little sense in context. For one thing, the notion is nowhere else discussed let alone illustrated in the treatise. More importantly, the passage completely contradicts the reservations Guido had just expressed regarding the use of the *b-rotundum* by singers. The mystery is clarified when we realize—as Fétis soon did—that the manuscript Gerbert consulted for his edition was a later one, possibly as late as 1503.<sup>42</sup> The whole discussion of *subductio* turns out to have been an interpolation by some scribe that is nowhere to be found in any earlier manuscript copies of the *Micrologus*.<sup>43</sup>

We will hear more about the possible place of the diesis in medieval practice later on (particularly in chap. 3). For now, it may be a surprise for us to note that Fétis was not at all dissuaded by this evidence that the imposition of any sharp in chant practice was improper. Putting aside the spurious discussion of *subductio* in Guido's text, Fétis noted that a number of later theorists do speak of the possibility—indeed the necessity—of raising the whole tone below the *finalis* by a semitone at cadences. Citing one example given by Bonaventure of Brescia in a small cantorino of *musica plana* from 1494, Fétis pointed out how a *subtonum* in the *tetratus* tone (G) would often need to be sharpened in order to avoid a tritone cross relation. We can see an example of just such a situation in a closing from the sequence “Lauda Sion” attributed to St. Thomas of Aquinas (ex. 2.8).<sup>44</sup>

Fétis cited additional evidence from writers coming as late as the seventeenth century to support his argument that the raising of a pitch by a semitone was commonly undertaken by singers, particularly for chants in the seventh and eighth (tetrardus) modes as in the example above. Since so much of this practice is now lost to musicians, though, he ended his article by recommending that editors must include such accidentals in their editions of chant.

Now all his may seem to be an inexplicable thing to say from someone who had complained in the very same article about ignorant church singers adding extraneous notes (“notes parasites”) to their chants. This is not to mention the paradox of introducing an accidental (the sharp) that itself seems to project a sense of attractive force and stimulation every bit as strong as the tritone that it was meant to efface.<sup>45</sup> Yet Fétis was certain that there was no contradiction in his position. The question was not whether to exclude alterations altogether; rather, it was when and under what circumstances such alterations could be sanctioned. And, he insists, medieval theorists gave us

The image shows a musical score for a chant. The top system features a vocal line with a treble clef and a staff of notes. The lyrics are "Lau-da Si-on sal-va-to-rem, Lau-da du-cem et pas-to-rem." The notes are mostly diatonic, but there is a chromatic alteration in the second measure of the second phrase, where a note is lowered by a semitone. The bottom system continues with the lyrics "In hym-nis et can-ti-eis." and includes a double bar line followed by "etc." in the vocal line and "etc" in the piano accompaniment.

Example 2.8. Chromatic alteration in "Lauda Sion"  
from Fétis, "Du demi-ton dans le plain-chant," 112.

quite explicit directions as to what those circumstances were. Those today who would proscribe chromatic alterations from chant altogether (though he mentions no names, he is surely thinking of people like Danjou) were no less guilty of desecration than were those who applied such chromaticism wantonly. The irony was rich:

What! The necessity of the accidental semitone was revealed in the Middle Ages . . . to men who knew only the tonality of a single diatonic scale distinguished only by the various dispositions of its notes. But one would have the moderns, accustomed as they are to a completely different harmonic tonality possessing a frequency of semitones, repress these (semitones) completely in ecclesiastical chant with the exception of those that one naturally finds in the disposition of the scale.<sup>46</sup>

Staying true to the diatonic notes of a mode was fine in principle, but it could never be a dogma. Without the aid of these chromatic alterations, Fétis believed that chant would inevitably sound coarse and unpleasant. One could argue that it was only a matter of becoming accustomed to this pure diatonicism. But Fétis accepted this argument no more than he did those who returned from the Orient and claimed to have become completely adjusted to the "painful effects of their false intervals" (Fétis, 97). Simply because one might get used to something repugnant, he dryly added, is no proof that it is therefore good. And this was the problem with so much chant reform. By

washing away all chromaticism from chant practice, the so-called restorers of chant actually “de-naturalized” it. They made it sound vulgar and foreign. Most importantly, it would undermine its characteristic tonality.

So how can we make sense of Fétis’s arguments? It seems incredible that he could reasonably draw these conclusions based on such thin evidence. More to the point, it seems to be in complete contradiction to the historical and psychological principles he had laid down regarding the contrasting orders of *tonalité*. Wouldn’t these semitone alterations, however judiciously applied (and even if there was any historical sanction), still introduce some of the stimulating quality of modern tonality? We may recall Fétis earlier describing the essential diatonic property of the “unitonique” order: it was music of complete serenity, without tendency, without the appellative energy of the modern (“transitonique”) tonality. How could the imposition of these semitone alterations—particularly a raised leading tone—*not* impart precisely those energetic tendencies to the chant that are supposedly so alien to its essential character? Yet despite all the evidence accumulating against his views, he did not think there was any contradiction at all.

Fétis’s argument is not explicitly laid out in the article he wrote for Danjou’s journal. Yet it can be deduced from many of his earlier writings, and that argument rests on the metaphysical nature of tonality. We may recall from chapter 1 that Fétis always insisted that appellative tendencies are not empirical attributes immanent to a given scale, harmony, or even a single note; they were instead ideal forces projected by the mind. It follows, then, that modern tonality was no more ensured by the presence of a few raised accidentals than was ancient tonality violated by the same. This was because the ears of musicians at the time were not yet ready to receive and understand modern tonality. It would have been like someone babbling in a foreign language that no one could understand. Without any experience in listening to modern tonality, it would not matter whether certain songs contained sharpened notes or evinced other markers of modern tonality; such passages were necessarily dead letters to any listener of the time. While we might today think we are hearing *tonalité moderne* in some of this early repertoire, it is only our own conceit based on our own conditioning and experience. (This is why, as we will soon see, Fétis would remain unpersuaded by those critics who would cite examples of “dominant seventh chords” in the music of Palestrina or similar tonal signs in music before Monteverdi; it would not matter, since no one would have heard those harmonies the way we do.) Because there is chromaticism in music before 1600, it does not alter the fact that the basis of this music is still diatonic.

This reasoning—however precarious—also may explain Fétis’s surpris-

Sal - ve Re - gi - - - na Ma - ter mi - se - ri -  
Vi - ta dul - ce - - - do, et spes nos - -

Orguez.

- cor - - - di - ae. Ad te cla - ma - - - mus  
- tra, sal - - - ve.

Example 2.9. Opening harmonization of "Salve Regina" from Fétis, "Du demi-ton dans le plain-chant," 110.

ing indulgence when it came to his own harmonizations of chant. At the end of his article in Danjou's journal, Fétis addresses the effect that organ accompaniment has on the question of accidentals in chant singing and offers a few examples. When the organ is sounding underneath a chant, he remarks, it will often be necessary to add an accommodating accidental that would otherwise not be needed in the unadorned chant so as to avoid a dissonant cross relation. Such a prescription might explain the use of B $\flat$  in the organ accompaniment given in example 2.9 from the antiphon "Salve Regina." Presumably the B $\flat$  in section 3 softens the following F major chord by avoiding a nasty cross relation between B and F. But one might well ask how this could justify what happens at the end of the strophe with the introduction of a C $\sharp$  in the organ (and then picked up in the voice).

Completely side-stepping the rhythmic interpretation of the chant, the close of the strophe using a C $\sharp$  ("mi-se-ri-cor-di-ae") would seem to be a textbook example of an authentic cadence in D minor, complete with a passing seventh in the penultimate dominant harmony. It could hardly be justified on account of avoiding any tritone, since the C $\sharp$  actually creates a tritone with an earlier-sounding G. Yet in line with his indulgence for mixing tonalities that we saw illustrated in his 1843 *Méthode*, Fétis was adamant that such a "drawback" is both necessary as well as consistent with the original tonality (*Méthode*, 107). He justifies the change based on a procedure introduced by the "most capable harmonists" of the early fifteenth century (particularly Dufay and Binchois) who regularly used leading tones like this in order to



convey a sense of euphony and termination at the end of phrases. (This would be a good example of *musica ficta causa pulchritudinis*.) This is not the same thing as the modern leading tone, he again insisted, whose potency and syntactic implications are far more marked. Still, this music needed the raised chromatic to help shape and end the phrase. Such phrase endings are the only place in the music where such an alteration of the “primitive tonality” may be regularly employed (*Méthode*, 109). But in no way does such a change turn the older tonality into a modern tonality, at least if the organist otherwise keeps to the basic diatonic fabric of the chant.

So returning to the “*Salve Regina*” example, we see that Fétis allows for a bit of freedom in adding accidentals: we find several applications of B $\flat$  in the organ (presumably to soften potential cross relations between harmonies), and as noted, C $\sharp$  at the major cadence points. But elsewhere the essential first-mode texture is kept intact. This example, he proudly tells us, should resolve “all the difficulties” one might have in utilizing accidental semitones in the first or second mode to create an accompaniment that does not undermine the character of its special tonality.<sup>47</sup>

Of course Fétis’s arguments did nothing at all to resolve “*toutes les difficultés*” facing his contemporaries. Many readers quickly recognized the inconsistencies, and let us not fail to emphasize, the fallacies in his arguments. Immediately after the appearance of Fétis’s article, an animated response was sent to Danjou taking strong exception to the license Fétis seemed to grant singers and organists. The author of this response was Nicolaas Adiranus Janssen (1808–98), a Dutch cleric and instructor of chant at the seminary in Malines (Belgium) whom we have already heard from above excoriating the use of leading tones in chant singing. The author himself of a major treatise on chant that appeared shortly before Fétis’s article, Janssen was one of the most passionate advocates for the scrubbing of unnecessary accidental inflections from chant. He did concede that *some* *ficta* employing flats was occasionally justified. But the chromatic alterations Fétis advocated in examples 2.8 and 2.9, he insisted, can never be justified by any theoretical evidence because their impositions—and particularly those of sharps at cadential points—would be a capitulation to modern taste, indeed, a “revolting vandalism.”<sup>48</sup> Janssen reminded his readers that all the evidence Fétis cited to support his arguments for the use of a sharp were offered by witnesses describing polyphonic music, not plainchant. Janssen thus found it strangely inconsistent for Fétis to criticize so strongly earlier singers and organists for violating the authentic *tonalité du plain-chant* and yet allow himself changes redolent of *tonalité moderne* at cadential points in the chant.<sup>49</sup> How

could he possibly argue that these chromatics were not really behaving like leading tones?

Fétis offered little new in response to Janssen's objections other than repeating the same arguments he had made in his article while at the same time casting aspersions on Janssen's qualifications as a scholar and historian.<sup>50</sup> But it is obvious that Janssen had touched a raw nerve; Fétis was inconsistent about the application of accidentals in chant, and he obviously knew it. Without conceding anything in writing, he slowly moved away from his indulgence for tonal mixture in his later publications. By the time he published his *Histoire générale de la musique* in the late 1860s, we find him in full agreement with the likes of Danjou and Janssen regarding their insistence that the aboriginal modality of any chant be respected. Indeed, citing the same example of a fourth-mode antiphon (on E) in which Fétis had earlier placed several sharps, he now insisted that any such changes be strictly avoided (*HGM*, 4:172–73) so as to keep the chant's "original form." Clearly, in the intervening twenty-five years, Fétis had a major change of mind.

Fétis's newfound conservatism could certainly be attributed to the flurry of chant research after midcentury (some of which we will shortly review) in which such alterations of chant melodies were almost uniformly condemned. But a specific incident in 1845 might also have been a catalyst for Fétis's retreat.<sup>51</sup> It seems that clerics from the dioceses of Cambrai were considering in 1845 the adoption of a new edition of chant, and they met with Fétis, who had apparently persuaded them that his own antiphony might be the way forward to restore "the song of the church to its former splendor."<sup>52</sup> Apparently the Cambrai clerics were on the verge of commissioning Fétis to oversee just such an edition.

Meanwhile, though, Danjou had announced the discovery of the Montpellier Antiphony in 1847, and the Cambrai authorities soon decided that it provided the most reliable source on which to base their edition. In their "guidelines" to the new "Reims-Cambrai" edition, as it was called, the addition of any sharp to a chant melody was strictly prohibited, a condition that Fétis's own edition apparently did not meet.<sup>53</sup> It must have been a humiliating blow to Fétis, even as he learned a lesson, it seems.

But we are getting ahead of our story. In his article for Danjou's journal, Fétis was still strongly defending the addition of accidentals to chant melodies underscored by an organ accompaniment mixing in a harmonic practice drawn from *tonalité moderne*. It is clear that Danjou could not have been pleased by this. But what could he do? He certainly needed to remain deferential to Fétis, whose support and goodwill he had every reason to cultivate

as a publisher. Yet it is also just as clear that Danjou was more sympathetic as an ultramontanist to Janssen's point of view. Precisely one of the ills of contemporary chant practice that he singled out in the "manifesto" he penned for the next issue of his journal concerned the plethora of sharps and flats erroneously introduced by singers.<sup>54</sup> And we saw above how sensitive his ears were to the use of a raised chromatic even in a sacred chorus by Rossini. If he did not go as far as Janssen seemed willing to in terms of excluding chromatic notes, Danjou clearly took a more jaded position on the question of chromatics than did Fétis.<sup>55</sup>

Yet Fétis was not without his defenders. A number of church musicians agreed that the introduction of leading tones in the chant and modern harmonies in the organ accompaniment were not only permissible but desirable. So what if these chromatic alterations might inject a heightened degree of affective energy into the chant? Is passion a quality that must remain always alien to church music? It is a thought one letter writer conveyed to Danjou: "According to you, music [of the church] should never be dramatic, expressive, passionate; rather, it should be without passion, without sentiment, cold and icy." But is this really how we wish all music to sound in church? "Should one sing the praises of God coldly, without heart, without sentiment"—and most heretically of all, "in the Protestant manner?"<sup>56</sup>

The writer of this letter was the Jesuit Louis Lambillotte (1796–1855), yet another Belgian cleric who was also a prolific composer of church music. Like many other church musicians of the time, Lambillotte became caught up in the burning issue of chant restoration. His most consequential contribution, perhaps, was his "discovery" of a copy of the "original" manuscript in which "Saint Gregory" notated the complete corpus of Roman chant antiphons in neumatic notation. This manuscript lay in a monastery in St. Gall, Switzerland (Cod. Sang. 390), and Lambillotte was certain it dated from the eighth century. While Lambillotte's dating of this source has been proven to be off by some 150 years, the manuscript was nonetheless an important new source for scholars trying to decipher some of the earliest neumatic notations. Lambillotte himself worked tirelessly to have the manuscript transcribed and reproduced through lithography, a project that was finally complete and published in 1851. (It proved to be a surprisingly reliable transcription.)<sup>57</sup>

Lambillotte also wrote a number of studies of chant and edited his own antiphonary. Perhaps recalling Danjou's essay, Lambillotte produced one pamphlet shortly before his death in which, among other topics, he returned to the question of the semitone and its agitating affect.<sup>58</sup> There Lambillotte argued that Gregorian tonality had always been chockfull of appellative elements: the mi-fa fissure in any Guidonian hexachord, he pointed out, con-

veyed unmistakable “attractive force” that belied Fétis’s claim that chant was music without tendency (Lambillotte, 23). And how can one claim that the chromatic elements called on by many Renaissance composers lack attractive energy? Lambillotte was convinced that tonal forces of many kinds were present in music long before Monteverdi. Indeed, that most distinct marker of modern tonality—the dominant seventh chord—could be found amply employed by that supposed paragon of plainchant tonality, Palestrina (see ex. 3.2) And of course there was Guido’s discussion of *subductio* that seemed to sanction the usage of sharps in chant singing (20).<sup>59</sup>

Lambillotte deduced from all this evidence that singers might not only add chromatics in their readings of diatonic chant but that organists could employ chords drawn directly from modern practice. None of these changes need be inconsistent to the spirit of true church music.

Consequently, there is nothing that should stop us from adapting modern harmony to those notes that one calls *attractive* and thereby produce the dominant seventh chord. It is absurd to think that this harmony will render Gregorian chant dramatic simply because we have secular melodies full of passion and drama that use this chord, while there are other modern harmonies that are by no means as dramatic as these. On the other hand, it would be going too far to deprive Gregorian music of that which could give it life and movement.<sup>60</sup>

Lambillotte seems to want it both ways. The dominant seventh chord, he notes, need not always project uniform quantities of appellative energy; it could just as easily convey a certain degree of calm and quietude if judiciously employed (as shown by Palestrina). But even if it did energize the chant somewhat, what is so bad about that? As we saw in the quotation given above, Lambillotte did not believe that chant should always be intoned with dreary, dulling monotony. A little bit of harmonic energy and rhythmic animation in chant music is by no means inappropriate or sacrilegious. Why would we wish to deprive church music of such energy? “Man is not a statue who sings,” he tartly reminded Fétis.

The writings of Fétis, Danjou, Janssen, and Lambillotte all suggest how difficult it was for musicians at midcentury to separate ancient and modern tonalities in chant practice no matter how much they may have believed the two to differ. Some concession to modern taste was perhaps inevitable. Particularly when chant was subjected to organ accompaniment, it seemed almost impossible for it to avoid conveying some qualities of modern tonality. Would it ever be possible to disentangle them once and for all by returning to

a truly authentic, virginal language of plainchant tonality? Ironically, one of the individuals who argued most strenuously for the complete separation of chant from modern tonality was someone who more than any other character in our story had invested himself most heavily in modern music.

### D'ORTIGUE TAKES CHARGE

Joseph d'Ortigue (1802–66) is one of the most fascinating characters in the musical world of midcentury Paris, and if we want to understand the acute tension that existed between contemporary secular music and church music in the nineteenth century, there is probably no more interesting individual to consider. D'Ortigue began his career in Paris in 1829 (after a quickly aborted foray into law) as a critic of opera. He became an early champion of Berlioz and Liszt, both of whom remained lifelong friends. And until the end of his life, he wrote prolifically and perspicaciously on all aspects of contemporary music and theater in Paris for a variety of journals and papers.<sup>61</sup> He even tried his hand at composing opera, though with very little success. A liberal all his life, he once ran unsuccessfully for the assembly on the Republican ticket.<sup>62</sup>

On the other hand, d'Ortigue was a devout ultramontanist, and he wrote passionately on all aspects of church music, becoming one of the most influential movers on the question of chant reform. We have already seen an excerpt from one piece of juvenilia in example 2.1—a very short manual of chant singing; it was a work, I have suggested, that he would come to regret having penned. Perhaps his greatest contribution to the whole movement was the production of a monumental dictionary of liturgical chant published by Migne in 1853 that weighs in at over 1,500 folio columns and is a barely disguised agenda for the complete overhaul of chant practice.<sup>63</sup> While most of the entries are rehashes of text taken from earlier writers, a few of them are strikingly original, including the lengthy entries “philosophie de musique” and “tonalité”—from which we will be citing at several points in this book.

One wonders, then, how he reconciled these apparently contrasting roles as advocate for both modern and early music. In fact, he saw absolutely no contradiction because he believed each to belong to complementary spheres of human activity: the secular and the sacred. Man was by nature inclined to both worlds. Basing his views on the liberal theology of the Abbé Lamennais (who was also a major influence on Liszt), d'Ortigue believed music could be a means by which the spiritual and the corporeal could be bridged, the *génie consacré* and the *génie social*. Just as it was possible for a composer such as Berlioz or Liszt to write for both the concert hall and the cathedral, it was possible for any listener to appreciate both worlds of music.<sup>64</sup>



Figure 2.2. Joseph d'Ortigue. Pencil sketch by Jean Joseph Bonaventure Laurens (1854).  
Musée Duplessis, Carpentras, France/Bridgeman Images.

This is not to say, however, that those worlds be confused with one another. We have learned from Fétis (and now I will ventriloquize d'Ortigue) that contemporary music and the historical music of the church are separated by two completely differing tonalities. Indeed, these tonalities were "opposed, contradictory, incompatible."<sup>65</sup> They must never be mixed, for modern tonality is the "mortal enemy" of plainchant tonality (p. xxi). Any such

mixture results in a “bastard and monstrosity of heteroclitite psalmody.”<sup>66</sup> (We might recall from the capitalized quotation cited at the beginning of this chapter that it was d’Ortigue who accused modern tonality of the murder of plainchant tonality.) It was as important to maintain the distinction of opposing tonalities in music as it was to maintain the genres of sacred and secular music, “the distinction between these two orders of inspiration in art, and in music, the distinction of two tonalities, one constitutive of expressions calm, sweet and penetrating suitable for prayer, the other constitutive of feverish and sensual expressions suitable for human passions.”<sup>67</sup>

D’Ortigue contrasted the restless, directed nature of modern tonality with all its many tendency tones inexorably moving the music forward and its well-established systolic conventions of harmonic succession and cadence with the more static quality of plainchant melody. If modern tonality was a grammar of the verb and the preposition, then plainchant tonality was a vocabulary of the substantive noun and the object; one was the syntax of action, the other a semantics of rest; the former was a rational language of the mind, the latter an emotional expression of the heart. (The Rousseauian undertones to his argument are unmistakable.)<sup>68</sup>

We should not be surprised to find, then, that on the very practical question of introducing accidentals into chant, d’Ortigue took an uncompromising position, obviously repenting for his *péchés de jeunesse* revealed in example 2.1 above. The use of a sharp, he wrote in the article “Dièse” should “never be admitted into plainchant.”<sup>69</sup> Otherwise, one is imitating the ignorant architect who places Greek columns in a Gothic cathedral.<sup>70</sup> Wasn’t it Fétis who had taught us that the modern and ancient tonalities are based on completely opposing systems of composition and are organically incompatible?

D’Ortigue was thus naturally chagrined that our learned Belgian historian caved in so easily concerning the question of accidentals in chant. Citing exactly the harmonization of “Salve Regina” reproduced above as example 2.9, d’Ortigue expressed dismay that Fétis would so quickly cede to the “exigencies” of modern tonality by granting the organist license to play such chords.<sup>71</sup> Clearly the root of the problem, d’Ortigue was certain, lay with ignorant organists—and perhaps with the instrument itself. As soon as chant begins to be accompanied by the organ, the infection of modern tonality is almost impossible to avoid. For organists today had all grown up with modern tonality; few of them knew of anything else.<sup>72</sup> It was they, he was convinced, who were most guilty of corrupting the ears of singers to the point where few of them could sing a subtonic without the urge to raise it a semitone. If chant was to be reformed, not only must we clean up the many edi-

tions of graduals and antiphonaries singers use, we must also get rid of these organ accompaniments.

One sees that d'Ortigue had come a long way from his first involvement in chant that we sampled in which quite obvious influences of modern tonality are to be heard—most conspicuously, through the use of raised leading tones.<sup>73</sup> In the ensuing years, D'Ortigue solidified his thoughts about this question and became increasingly dogmatic regarding the separation of the two tonalities. Sylvia L'Ecuyer suggests that d'Ortigue's religious conservatism resulted from his disillusionment with the failed revolution of 1848.<sup>74</sup> But while there is no question that many Republican sympathizers were indeed dismayed by the apparent betrayal of the revolutionary ideals by Napoleon III, I think it is a mistake to view d'Ortigue's conservatism regarding chant as simply a case of belated political reactionism. For we will see that he did indeed retain strong Republican sympathies until the very end. Empathy for the folk and fidelity to the church were not exclusively opposing sentiments as Laménais's own activist theology had shown. We'll return to this political question later on in chapter 4. For now, though, let us continue to follow d'Ortigue's increasing involvement in the question of church music reform.

Throughout the 1850s, d'Ortigue played a major role as impresario of the chant reform movement. While he did not engage himself in any of the detailed "archeological" work of his many colleagues, he used his position as a public critic and editor to promote much of their work, lending his strong rhetorical voice to the cause. In 1857 he helped found a journal devoted to the question of church music that would replace Danjou's journal, which had ceased publication three years earlier. While the new journal, *La maîtrise*, did not survive much longer than Danjou's *Revue* had, in its short life span, it helped to serve as a platform from which some of the most recent research concerning chant could be made public and differing views could be exposed.

Through the 1850s, an unprecedented number of publications came out on in France and Belgium related to the performance of chant within the church. (We have already dipped into a few of these writings.) But despite all this research—perhaps because of it—the aim for unity in the singing of sacred song in the church remained elusive. Of the eighty some dioceses in France by 1859, fully fifty of them continued to use some version of the late seventeenth-century editions of Roman chant edited by Nivers. A dozen more had their own local customs and editions of chant. Seven of them had adopted Lambillotte's truncated gradual (1857) and another twenty the Reims-Cambrai edition (1851).<sup>75</sup> This is not even to consider Belgium where



there was an even sharper split between adherents to the new Malines editions (1848) and older Roman editions.

Visitors traveling between cities in France and Belgium in the late 1850s, then, could have encountered completely differing versions of chant depending on which services they attended. And then there were the widely varying performance practices regarding rhythmic interpretation, accentuation, or organ accompaniment one could hear. Clearly, the time had come, d'Ortigue believed, for scholars and clerics of good will to come together and once and for all resolve their differences for the sake of church unity. It was with this in mind that he proposed an international conference to be held in Paris to which all the participants in the reform movement would be invited. The first call was sounded in *La maîtrise* on June 15, 1859. There, d'Ortigue had posed a single challenge to his readers: "How could a way be found to unify plainchant as has already been done for the liturgy?" He suggested that all scholars and clerics with an interest in this question meet in Paris for a conference to discuss the state—and future—of chant scholarship and practice. With the backing of several prominent clergymen of higher rank, a preliminary meeting of some fifty invited guests was finally held on May 25, 1860, where the program of the conference was hammered out. The actual conference would take place six months later from November 27 through December 1. On the appointed day, over 150 participants showed up in the hall of the Société d'encouragement pour l'industrie nationale on rue Bonaparte 44 for what was christened the "Congrès pour la restauration du plain-chant et de la musique d'église."

Although it was not the first attempt in the nineteenth century made by clerics and scholars to meet and resolve questions related to chant (and hardly the last, either), it ended up being one of the most important. All the leading chant researchers and instructors in church music from France and Belgium (and a few from farther afield) participated as well as many leading clerics. (Fétis was one of the few no-shows, although he sent his regrets and best wishes from Brussels for the success of the conference.) Over the five days of the conference, we read of animated discussion among the many participants on just about every area of dispute regarding plainchant.<sup>76</sup>

Running through the many discussions like a red thread was the question of tonality. "Tonalité," observed the organist Stéphen Morelot in the middle of the conference, "c'est le mot qui rend bien notre pensée à tous." (Tonality, it's the word on everybody's mind) (*Congrès*, 43). While there was unanimity expressed that "[instructional] methods be adopted in the seminaries that take into account the nature of plainchant, its tonality, the distinctions between its modes, its intention, its rhythm, its melody, its accentuation,

and its style" (*Congrès*, 49–50), no concrete guidelines were agreed on as to how all this might be done. The closest that the delegates came to offering such guidance was a proposal to single out and endorse a recently published method of chant that was authored by a young canon from the Cathedral at Le Mans named Augustin-Mathurin Gontier (1802–81). Yet despite the vigorous championing of Gontier's method by d'Ortigue and a number of others, that proposal was rejected. (One delegate worried that by endorsing a single publication that not all participants in the Congress knew, other methods that might have value would be prejudiced and their authors unfairly slighted—*Congrès*, 49.) Still, Gontier's method was repeatedly praised by members, even by those who insisted that it not be formally endorsed by the Congress. And a lengthy extract from the work was included as the first document in the appendix published in the conference proceedings (77–81). It was the closest that the Congress came to an official endorsement.

The extract cited in the conference appendix was drawn from a small "Méthode raisonnée" that had appeared a year earlier.<sup>77</sup> There Gontier outlined a rhythmic theory of chant performance that emphasized the natural, unmeasured singing of the text, one that rejected any use of equal or proportional note values. This was a theory that Gontier was developing in close collaboration with a young abbot interested in the reform of chant, Dom Guéranger from the nearby (and newly established) Benedictine Abbey at Solesmes. Although he was himself not a member of the order, Gontier's work can be seen as the first that attempted to codify a practice then being cultivated at the Solesmes monastery. Indeed, for Pierre Combe, the major historian of the Solesmes reforms, Gontier's method was the Solesmes method, at least as it had been developed up to that time.<sup>78</sup>

The question of chant rhythm plays an interestingly complementary role to the problem of tonality on which we have been focusing. Just as Gontier and his Solesmes colleagues were trying to purge chant singing of the worldly rhythmic practice of measured music and return to a freer, more declamatory style of chant recitation, d'Ortigue and his colleagues were trying to purge chant tonality of all secular chromaticism and return to a more dignified diatonicism appropriate for the expression of religious sentiment. Perhaps we could say that the tonal reform of chant was the spatial equivalent of the temporal reform of its rhythm; in each domain, a similar natural, unconstrained performance aesthetic thought appropriate for the pious sentiments of the chant texts was sought.

Gontier certainly recognized the necessity for reforming chant tonality as much as its rhythmic performance. This dual task is made explicit in the full title of his treatise: *Méthode raisonnée de plain-chant: Le plain-chant*

*considéré dans son rythme, sa tonalité et ses modes.* And like d'Ortigue, he knew this meant, above all, clearing chant of the jungle of chromatics and semitones that had overgrown it. Using rhetoric that we have already heard from Janssen and d'Ortigue, Gontier insisted it was really a question "of life or death for plainchant," "Because to tolerate this mélange of chromatics in the diatonic, it is to pass into the camp of the enemy; it is to deprive plainchant of the nature of which it is constituted."<sup>79</sup>

D'Ortigue, as already mentioned, was an aggressive champion of Gontier's treatise. He had earlier published the preface of Gontier's little manual in an issue of *La maîtrise* (July 15, 1859). And he happily supplied an endorsement for the work (along with Dom Guéranger) that Gontier gratefully included in the final publication. ("Mon approbation? Mais vous l'avez tout entière!") While Gontier did not receive the official approbation of the conference that he had hoped, he still came away from it satisfied that his work had gained the attention and grudging admiration of all its participants. Writing to Guéranger two days after the close of the conference, Gontier could proudly report, "During the entire Congress, the dominant theme was that there was only one method, the method of Father Gontier."<sup>80</sup>

Gontier's presence at the Congress of 1860 marks a caesura of sorts in the history of chant scholarship and a terminus for my present discussion. For from this point on, it became clear that the field of action in chant scholarship, at least in France, had moved some two hundred kilometers away from Paris northeast to the monastic cells of Solesmes. There, Dom Guéranger and his fellow Benedictine brethren (Dom Jausions, Dom Pothier, and eventually, Dom Mocquereau) would collectively revolutionize chant performance over the next half century. Thus, the Congress marked both a close of one chapter and the beginning of another in chant history. Meanwhile, another issue raised by the Congress began to cause a stir: whether and how the organ may be used to accompany the singing of chant.

## THE QUESTION OF ORGAN ACCOMPANIMENT

We have seen in several examples cited at the beginning of this chapter how in the nineteenth-century chant was often accompanied by organists using rather leaden, tonally infused chords. We have also seen how Fétis himself countenanced much of this practice in his own accompaniments. It is not surprising that some of the more zealous chant reformers called for the complete eradication of such accompaniments. D'Ortigue was one such voice, saying flatly that chant "should never admit of any kind of harmony, and that all systems of accompaniment can only hasten its ruin."<sup>81</sup> There seemed no

way around it; the organ was an anachronistic monstrosity when brought into the service of plainchant. Might it not be better to tear out the mammoth Cavaillé-Coll organs that were built in so many Parisian churches and return to the practice of pure a cappella singing?

Of course there were few such rabid Savonarolas in France who made that argument. And truth be told, neither did d'Ortigue. The practicality and beauty of the instrument in helping to support singers was not to be gainsaid. But along with d'Ortigue there were many who recognized that the accompaniments played by too many organists were a major hindrance to the progress of chant restoration. It became one of the dominating topics of discussion among the participants of the chant congress of 1860. Too few organists, delegates complained, understood the nature of plainchant tonality; too many seemed ready to translate all chant accompaniments into Protestant-sounding chorale textures controlled by modern harmony. Nothing more contrary to Catholic tradition could be imagined. But even if they did try to accommodate the older tonality, the noisy instrument seemed hardly conducive for supporting the sense of ethereality and delicacy suggested by chant singing. Fétis's apparent fatalism about reforming chant practice was due in no small part to the resilient prejudices of most church organists.

Others, however, were not ready to give up quite yet. If the organ was to be retained to accompany chant and be saved from complete banishment from the church, there would have to be a wholesale reform of its practice and pedagogy. Was it possible to codify and teach such a practice? This was a task that Louis Niedermeyer set for himself.

Louis Niedermeyer (1802–61) was not the musician one might have expected to become so heavily involved in the chant reform movement at midcentury. Let alone that he was a Swiss Protestant by birth, he started out his musical career as an opera composer in the style of Rossini (with whom he maintained a close friendship). Indeed, Niedermeyer continued to compose operas well into his career, although few of them achieved much success. But he never gave up a deep love of sacred music, particularly the vocal music of Palestrina, which he must have heard when studying in Italy. Trained as an organist by his father, a minister, in 1853 Niedermeyer resurrected the defunct school of church music that had been founded by Choron earlier in the century. Renamed after its new director, the *École Niedermeyer* became the most important and influential educational *maîtrise* for French church musicians. (Among its students were Gabriel Fauré and Camille Saint-Saëns.)

In 1855, Niedermeyer produced a treatise on chant accompaniment that presumably reflects instructions his organ students were receiving at his

school. To help write and promote his treatise, he engaged an ally who was his exact contemporary. It was none other than our Joseph d'Ortigue.<sup>82</sup>

Now the friendship of Niedermeyer and d'Ortigue makes sense on many levels. Both had backgrounds in opera and secular music, and they must have long crossed paths on that front. Both also became interested in the movement to reform chant and help to revitalize church music. With these shared backgrounds and interests, it is not a surprise they recognized in each other kindred spirits. Niedermeyer in fact was soon invited by d'Ortigue to help him in the coediting of his journal, *La maîtrise*.

Still, the collaboration on the organ treatise might at first seem incongruous in that d'Ortigue, as we have seen, had just cast a jaundiced eye on that instrument in the service of chant singing. Niedermeyer was evidently able to persuade his friend that organ accompaniments could indeed be done with both good taste and historical sanction. The secret to this kind of harmonic accompaniment was to be found, as Fétis had already suggested, in the great polyphonic vocal music of the sixteenth century—especially that of Palestrina. In this repertoire, so the argument went, we can see how the most delicate, refined harmonies may be employed to accompany chant melodies that not only do not contradict the ancient chant tonality (“throwing it into the water of modern tonality” as d'Ortigue put it) but actually reinforce and adorn that tonality.<sup>83</sup> The trick is to avoid using chords and progressions with obvious tendencies of modern tonality.

This was an ideal that Danjou had already expressed earlier. (Danjou, we might recall, was also an organist and eager to find ways to reconcile chant with his beloved instrument.) Danjou thought that the polyphonists of the sixteenth century showed the way:

I believe that the careful study of ecclesiastical tonality and its connections with harmony is the basis of all organ teaching; and as long as organists do not follow this path, that instrument will remain the echo of the orchestra and of futile music, or the refuge of pedants.<sup>84</sup>

All the organist needed to do was to learn how to play chords underneath the chant that were compatible with this ecclesiastical tonality.

It actually was not that hard of a trick to learn. There were two essential “laws” to Niedermeyer’s method that the organist must follow at all cost. First, the music must stay within the “tonality” of the chant—that is, using just the diatonic notes of a mode without any chromatic alterations. Needless to say, this meant avoiding any raised leading tones, as they introduce a “lively attraction” to the music that belongs only to the world of modern

**TROISIÈME MODE.**

The image shows a musical score for a third-mode accompaniment. At the top, it is titled "TROISIÈME MODE." Below the title, there are two staves. The upper staff is a vocal line with the lyrics "TERTIA di - e est quod hoc fac - ta sunt,". The lower staff is an organ accompaniment. The organ part consists of two staves (treble and bass clefs). The treble staff has a key signature of one flat (B-flat) and a time signature of 4/4. The bass staff has a key signature of one flat (B-flat) and a time signature of 4/4. The organ accompaniment is characterized by contrary motion between the outer voices and avoids fifth leaps in the bass.

Example 2.10. Example of a third-mode accompaniment from Niedermeyer and d'Ortigue, *Traité théorique et pratique de l'accompagnement du plain-chant*, 17.

tonality.<sup>85</sup> Second, the “modality” of the chant must be followed, which is to say its formal functions of final and dominant must be known and supported. In practice, Niedermeyer and d’Ortigue restrict the organist to the use of only those major or minor triads (and their “first inversions”) found in a given mode. The diminished triad was prohibited, although its first inversion was allowed. In addition to learning how to apply and connect such harmonies using the smoothest voice leading, the organist must learn characteristic intonation formulas and cadence patterns for each mode. Finally, the organist must learn to follow the general phrasing and pacing of the chant, which is always to be sung as the upper voice.

We can get a taste of the Niedermeyer style of accompaniment in the third-mode formula shown in example 2.10. While perhaps still sounding a bit clunky to our own ears, Niedermeyer’s accompaniment does make a clear effort to avoid obviously functional progressions that might suggest modern tonality. This is done by employing contrary motion between the outer voices wherever possible and avoiding any kind of fifth leaps in the bass suggestive of a tonal cadence. Needless to say, no raised leading tones were ever sanctioned. Thus, even those seventh-mode cadences of *Lauda Sion*, which so vexed earlier theorists (see ex. 2.8), can be simply harmonized with a sub-tonic by use of contrary motion in the outer voices (see ex. 2.11).

With a little practice, any organist could learn to improvise such an accompaniment to a chant without undue difficulty. Hearing the simple—yet profoundly rapturous—effect of a modal cadence such as that in example 2.11, our authors thought, was in many ways the key to opening up the sublime world of medieval chant and its ancient tonality. Here d’Ortigue surely lent his skilled pen to Niedermeyer in a crescendo of poetic ecstasy.

[These cadences] are a source of great beauty, and their harmonies, perhaps sounding rough at the first hearing, soon convey a singular impression of calm majesty, of vigorous simplicity that marvelously achieves an expression of august placidity and a seraphic unction. They soar above



Example 2.11. Accompaniment to a seventh-mode cadence from Niedermeyer and d’Ortigue, *Traité théorique et pratique de l’accompagnement du plain-chant*, 80.

the dark regions in which we dwell. They are the harmonies of the soul and not the body. They betoken death, it is true, a death of that which is earthly, but they recall the ineffable joys of life that is not yet finished. It is this that gives plainchant its unfathomable character that our worldly arts strive to appropriate in vain and that is completely effaced in the tentative accompaniments that have been made up to this day, but which regain their luster in the harmonies whose rules we have given.<sup>86</sup>

We may be hard pressed to get the same sense of “august placidity” or “seraphic unction” in these plodding chord progressions that d’Ortigue so poetically extolls. The *École Niedermeyer* is still a product of its time in its concession to a rigorously chordal, note-by-note accompaniment to a chant melody. And the emphasis on root-position triads often gives the music a rather stilted feel. But many observers of the day agreed it constituted a great improvement over the kinds of accompaniment previously taught, and it garnered widespread support from the more zealous chant reformers. It received warm recognition by members of the chant congress from 1860, where it was praised by one participant as conserving the “true character” of each mode.<sup>87</sup> The treatise was reprinted many times over the remainder of the nineteenth century and translated into several languages. Saint-Saëns was one student of the *École Niedermeyer* who retained fond memories of his training:

Our predecessors . . . made an accompaniment [which was rhythmically deplorable] and, as a climax of illogic, they transformed by means of this useless accompaniment music composed in the ancient modes into modern tonalities. A remedy for these evils was sought by Niedermeyer, who, despairing of extirpating the error of playing an accompaniment to plainchant, at least attempted to render it more rational by conserving its “modal” character by means of an ingenious system.<sup>88</sup>

By the end of the century, though, few organists were playing the square chordal accompaniments learned by the first generation of Niedermeyer pupils. Most had meanwhile mastered a more fluid kind of playing that lightened the texture of the accompaniment using more sustained harmonies lightly embellished by delicate counterpoint and motivic imitation while also allowing for greater rhythmic freedom for the singers. It was a program—and aesthetic—that was also taken over in the *Schola cantorum*, founded in 1894.

Niedermeyer's program of modal austerity, however, was hardly the last word on the matter. Since no position on church music ever went unchallenged in the nineteenth century, we cannot be surprised to hear multiple voices raising objections to Niedermeyer's program. And the gist of these objections suggest that the battle between ancient and modern tonalities was by no means resolved when it came to the music of the church.

One school of thought was that Niedermeyer did not go far enough. We already heard d'Ortigue suggesting that any kind of accompaniment of chant by an organ is by its very nature inauthentic and contrary to the true spirit of chant practice. Others agreed with Niedermeyer that organ accompaniments might be useful but still needed restrictions and refinement. For example, Alexander-Joseph-Hydulphe Vincent (1797–1868), a polymath philologist with a passion for early music, thought that the final sonority in any cadence would have to exclude an imperfect third in the organ accompaniment if it were to reflect the appropriate tonality of chant. Only open fifths and octaves at cadences (and elsewhere, for that matter) can reflect the sobriety and grandeur of ecclesiastical tonality, a kind of austerity also to be observed in the great polyphonic masterpieces of the fourteenth and fifteenth centuries.<sup>89</sup>

But these were largely minority opinions. Far more common were the organists who defended some use of modern tonality in their harmonizations. For these modernists, it was never a question of what might be historically accurate or not; rather, it was about what was both sonorous and practical today. One of these organ pedagogues, J. L. Battmann, spoke for many church musicians who questioned the kind of modal purity advocated by Niedermeyer and d'Ortigue. Using many of the same arguments we heard from Lambillotte, in a publication from 1855, Battmann asked why we should not take advantage of the "immense and magnificent resources that harmony places at our disposition" when accompanying chant.<sup>90</sup> Why is the unsullied modality advocated by the purists always to be desired? The unraised leading tone was a clear case in point. Failing to raise it in the first (Dorian) mode, he countered, sounded awkward and unsatisfying to most musicians today. Actually, it was more than that, being nothing less than a "monstrosity!" "Is



it agreeable to God," he asked sarcastically, "that the ears of the faithful must be tortured by omitting a leading tone demanded by nature on the mistaken pretext that it will render plainchant too sensual?"

Adrian de La Fage had made a similar point the same year, calling the whole-tone cadence "dur" and "barbare."<sup>91</sup> This was a sentiment echoed in 1856 by Francois-Auguste Gevaert, a young Belgian composer and historian whom we will be encountering many times again in subsequent chapters. While conceding that the leading tone (with its "attractive dissonance") was an essential property of modern tonality, Gevaert insisted that it need not be barred from chant practice. On the contrary, "we believe it is better to employ the sharp in moderation than to torture the ears of the faithful by barbarous successions that are the antithesis of the sweet consonance that should reign in plainchant."<sup>92</sup> We don't live in the Middle Ages anymore, Gevaert tartly reminded his readers, and it is ridiculous to pretend otherwise. Times have changed, and so have musical sensibilities that cannot simply be turned back.

Berlioz was one listener who thought that the rapturous enthusiasm for medieval tonality expressed by some church musicians was getting a bit ridiculous. In a review he wrote of a book by d'Ortigue on church music, he mocked the author's aesthetic mush about plainchant and its "simplicity, the vagueness, the indecisive tonality [*tonalité indéçise*], the impersonality, the inexpression that, in the eyes of M. d'Ortigue is the principle merit of plainchant."<sup>93</sup> But more than this vacuous blather, Berlioz was irritated by d'Ortigue's suggestion that only the ancient tonality of the church was capable of expressing true religious sentiment and that modern tonality had nothing to say in the church. How could one possibly demonstrate that, he wondered?

Who will prove to me, for example, that the *Ave verum* of Mozart, written in modern tonality with modern harmonies and modulations, does not express the most profound, the most exalted religious sentiments in its boundless calm, its exalted love? I do not believe one could offer any reasoning no matter how subtle, no logical argument no matter how profound, that could ever shake me of my faith in this opinion. For me, [Mozart's music] is marvelously beautiful, perfectly true, perfectly pure, worthy of its subject, sublime. I have never felt ecclesiastical tonality capable of arousing in me impressions of this nature.<sup>94</sup>

D'Ortigue actually already had an answer to Berlioz's argument. It was not a question of the beauty of the *Ave verum*, nor of Mozart's genius and his

ability to arouse some of the most profound sentiments within the human soul. But everything must be put into context. When played in a church setting, d'Ortigue insisted, Mozart's masterpiece gave a very different impression:

Yes, I believe that Mozart penetrated the most profound sentiments of piety, adoration, and the Catholic faith, even in the composition of his admirable *Ave verum*. That said, I would add that if you performed the *Ave verum* not in a salon, not in a concert hall, but in a church, in the midst of an imposing service, at the foot of the altar, through the bright light of candles, the vapors of incense; and, at the same time, if you descend from the lectern with the altar boys singing their most simple plainchants in alteration, I challenge you to tell me, your right hand on the Bible, that the *Ave verum* of Mozart, this prodigy of inspiration and genius as you please, does not convey something a bit too complex, a bit too artificial, too human? Does it not fade and even disappear altogether in the presence of that other genius who has found the secret of that unctuous and august simplicity of liturgical chant? . . . In the system of modern tonality, on the contrary, while the composer may be happily inspired by whatever he does, one is no longer in the church. There is anachronism, incompatibility, and jarring anomaly. In two words, the tonality of the ecclesiastical modes is constitutive of religious expression; tonality based on natural dissonance, however, is constitutive of expression that is passionate, human, and earthly.<sup>95</sup>

But d'Ortigue's arguments did not change his friend's mind. For that matter, a large number of church musicians remained unpersuaded that modern tonality and Christian piety were incompatible. Stéphen Morelot, who was one of the most committed restoration activists of chant, thought Niedermeyer and his partner d'Ortigue had gone too far. While ancient tonality certainly was an ideal that ought to guide organists today in their accompaniment practice, he wrote in 1861, it need not be done with such rigid orthodoxy. Citing many of the arguments Fétis had used, Morelot felt that a few chromatic alterations or dominant seventh chords do not necessarily obliterate the sense of ancient tonality. After all, he kept reminding his readers, these alterations were sanctioned by both theorists and composers of the Middle Ages. A raised leading tone at a cadence, he was sure, was an "absolute rule following the principles of not only modern tonality, but also. . . . sanctioned by the older contrapuntists."<sup>96</sup> It was a sentiment that was frequently echoed. For the Abbé Henry, another author of an accompaniment

treatise that was published in 1885, it was no surprise that more and more organists were abandoning the Niedermeyer method, “tired of its harmonies so somber, severe, monotonous and restrained, [with its] indistinctly heard modes with no characterization.”<sup>97</sup> For Théodore Nisard, the author of several major studies of chant, Niedermeyer was an irredeemable “utopist.” The greatest masters of the fifteenth and sixteenth centuries, Nisard assures us, showed us how to harmonize a chant with true fidelity and beauty, including, he noted, adding a leading tone at cadential points.<sup>98</sup>

We see here, then, essentially two arguments being made, one old and one new and neither quite compatible with the other. The old argument is the one we heard from Fétis: chromatic alterations of chant and its accompaniment could be sanctioned by historical evidence of *musica ficta* as well as the polyphonic practice of the fifteenth- and sixteenth-century masters, where semitones were added for the sake of euphony. A raised semitone leading to the *finalis*, as Fétis suggests, is not necessarily heard the same way a leading tone might be heard in the context of modern tonality. And even if there were a tension in this with historical practice, so what? As Gevaert and Nisard both made clear, we live in a day when musicians expect and want the leading tone in their music; there is no point in violating our expectations and tonal sensibilities simply for the sake of some putative historical purity or imagined Christian aesthetic.

But there was a second, newer argument that was also being made by many of these defenders of “modern” practice, even if it was slightly under the surface. Maybe the distinction between the two tonalities is not the gaping chasm that its advocates make it out to be. It seems obvious that earlier musicians—the “anciens contrapuntistes” referred to by Morelot—felt the need to add these alterations and obviously found them pleasant and natural. Might this suggest that the older tonality did not quite enjoy the monolithic, eight-hundred-year reign that Fétis had claimed? Or turning the question around, might it be that modern tonality had deeper roots than previously thought?

These were troubling questions, for they sowed serious doubts about the rigid demarcation Fétis had drawn between ancient and modern tonalities to which most chant reformers had now subscribed. We can understand today why it was entirely in their interest to insulate the musical patrimony of the church from what they considered to be the contaminations of modern, secular tonality. But what if the boundaries between sacred and secular music—and perforce between ancient and modern tonality—might not be as sharp as the more conservative Catholic defenders had claimed? Dating the origins of modern tonality, then, turned out to have surprisingly high stakes.

## Origins

Fétis expressed no doubts about the birth of modern tonality. He could point with absolute precision to the time and place it first emerged from the chrysalis of modality and unfolded its wings: it was in 1605 with the publication of Monteverdi's *Il quinto libro de' madrigali*—and even more specifically, in measure 13 of the volume's famous opening number, "Cruda Amarilli."<sup>1</sup> There, as seen in example 3.1, we hear an unprepared dominant seventh chord above a *basso* on D in which an unprepared ninth in the *canto* leaps down to a seventh, along with the suspended tenor voice resolving to F♯ on the last beat of the measure, thus creating a diminished fifth (Fétis's "minor fifth") with the *canto*. Here was the "first example" Fétis knew of in which Monteverdi employed a natural dissonance without preparation (*Traité*, 166). Together, this triad of notes on scale degrees  $\hat{5}$ ,  $\hat{7}$ , and  $\hat{4}$  (D3, F♯3, and C5) exerted an inexorable appellative urge toward a resolution on the following G-major triad. More accurately, perhaps we should say following Fétis's idealist notion of tonality that the unprepared dominant seventh chord illustrated in this passage was *perceived* by listeners as projecting an inexorable appellative urge toward resolution. There and then, Fétis exclaimed, in this audacious violation of the most venerable rule of traditional *contrapunctus*, music crossed the Rubicon from its *unitonique* order to that of the *transitonique* order, from the *tonalité du plain-chant* to *tonalité moderne*.

Well, well. That which was condemned by all the doctrines [of counterpoint], that which was proscribed throughout the centuries, one man dared to do. Guided by his instinct, he had more confidence in his own inspiration than in the rules. And despite the cries of disapproval from all musicians, he dared group together the fourth, fifth, and seventh notes of the scale, and by this single act create the natural dissonances of har-

N.º 1.

The image displays a musical score for a madrigal. It consists of three systems of staves. Each system includes a vocal line (soprano, alto, and tenor/bass) and a lute line with tablature. The lyrics are: "Che col nome an-co-ra d'a-mar ahi las-so che col nome an-co-ra d'a-mar ahi las-so che col nome an-co-ra d'a-mar ahi las-so." The tablature uses numbers 3, 4, 5, 6, 7, and 8 on a six-stringed instrument. The score is in a single system with a common time signature.

Example 3.1. Monteverdi, “Cruda Amarilli,” mm. 9–20, from *Il quinto libro de madrigali* (1605); cited in Fétis, *Traité*, 167.

mony, a new tonality, the musical genre that is called *chromatic*, and consequently, *modulation*. Such riches produced by a single harmonic aggregate!<sup>2</sup>

“Cruda Amarilli” was hardly an arbitrary choice by Fétis. It was an iconic work of the *seconda pratica* already made famous as the focus of a celebrated polemic launched by Giovanni Artusi in 1600. Of course the primary issue

The image displays two systems of musical notation for a Kyrie. The first system shows measures 4 and 11, with labels 'Kyrie. 4<sup>e</sup> mesure.' and '11<sup>e</sup> mesure.' respectively. The second system shows measures 14, 18, and P. 7, 2<sup>e</sup> mesure. Each measure is presented on a grand staff with a treble and bass clef. The chords are dominant seventh chords, characterized by a major triad with a minor seventh interval. The notation includes stems, beams, and note heads, with some notes being beamed together in pairs or groups.

Example 3.2. Five “dominant seventh chords” from Palestrina’s *Missa Papae Marcelli*; cited in Lambillotte, *Quelques mots sur la restauration du chant liturgique*, 24.

that exercised Artusi so greatly concerned the violation of long-sacrosanct rules of counterpoint. But Fétis wished to emphasize that the real radicalism of “Cruda Amarilli,” and perforce the whole “second practice,” lay not so much with the use of any irregularly prepared dissonance as much as the introduction of a fundamentally new kind of tonality: *tonalité moderne*.<sup>3</sup> As we can imagine, though, by fixing the birth of modern tonality with such pinpoint accuracy, Fétis opened himself up as a tempting target for critics. One of the easiest games his opponents could play was to find counterexamples of dominant seventh chords that preceded “Cruda Amarilli.” As early as 1834, Fétis later reported, he was hearing just these kinds of arguments from his readers.<sup>4</sup> They ranged from an anonymous Englishman to the Bishop of Ratisbonne to a mystic named Camille Durutte; from the chant editor Louis Lambillotte to the Austrian musicologist Raphael Kiesewetter to the Russian historian Alexander Oulibicheff.

Let us look at the arguments of Lambillotte as a typical response. We met Lambillotte in chapter 2 defending the use of modern harmonies in chant accompaniment. One of his arguments in his essay was that the dominant seventh chord, the very chord that Fétis identified as the signature harmony of modern tonality, could be found in countless works composed by Renaissance masters. In the Kyrie of Palestrina’s Pope Marcellus Mass, alone, Lambillotte was able to cull at least four instances of “dominant seventh chords” coalescing within the polyphonic web of voices (see ex. 3.2). While these might not be quite the same thing as the unprepared dominant seventh

chord of Monteverdi, they still imparted, he felt, a definite harmonic tendency toward resolution.

Fétis would have none of it. Already anticipating this line of argument in 1844, he rejected the possibility that seventh chords in the music of Palestrina—prepared or not—could possibly have any appellative quality. Certainly the mere presence of harmonies such as those isolated by Lambillotte proves nothing:

If such were the case, if, directed by his instinct in some particular cases, the illustrious master had really used the complete dominant seventh chord with an unprepared fifth, and if this chord had allowed him to form some unforeseen transition, there would be nothing to conclude from this isolated fact [*fait isolé*]. Lost in the immensity of works by the master of the Roman school, this fact would not have been revealed as the key to a new order of things, and would not even have been noticed.<sup>5</sup>

The point, as we learned earlier, is that modern tonality was a product of many factors intuited by the ear; it was not something that could simply be asserted by the presence of a single “isolated fact.” Just as a sharp in chant notation need not be heard as a leading tone, the seventh chords identified by Lambillotte do not inevitably project notions of dominant functionality. In the wash of diatonic modality and its many “prolongations,” there is no tonal determination, no possibility of modulation or transition. The only use composers had for dissonance was the retardation or anticipation of consonances. No, Monteverdi’s dominant seventh chord was altogether a differing kind of animal.

François-Auguste Gevaert (1828–1908) was yet another skeptical reader of Fétis who found his arguments about Monteverdi as the inventor of modern tonality to be questionable, as we can read in an open letter he addressed to Fétis in 1868. Gevaert was a fellow Belgian who had just recently been appointed *maître de chœur* at the Paris Opera. (Three years later he would succeed Fétis as director of the Brussels Conservatory.) But he also had a lively interest in early music history and would soon go on to write one of the most comprehensive studies of ancient Greek music of the entire nineteenth century.<sup>6</sup> In his letter to Fétis, Gevaert claimed to have identified numerous instances of the unprepared dominant seventh chord that preceded “Cruda Amarilla,” especially in the music of the earliest monodists.<sup>7</sup> Consider, he proposed, an excerpt from the *Nuove musiche* of Caccini (composed, he insisted, before 1589), which is reproduced in example 3.3.

Cadences just like this—Italian theorists would label it a *cadenza dop-*

mo - ro mi - a vi \_\_\_\_\_ ta

#10 11 #10 11 11#10 11

Example 3.3. Caccini, "Dovro dunque moirire," cited by Gevaert in *Le ménestrel* (November 22, 1868): 414.

*pia*—occur at least twenty-five times in Caccini's piece, Gevaert pointed out. The extravagant vocal *gruppo* supported by a strong dominant prolongation in the basso continuo certainly offers a more convincing example of the unprepared dominant seventh chord than did any madrigal of Monteverdi's.

But this was not actually the main point Gevaert wished to make. He did not want to declare victory over Fétis simply by finding an earlier example of the unprepared dominant seventh (or perhaps even an unprepared fourteenth chord!). Such a game was really ludicrous, since he was certain that the birth of modern tonality could not be pinned so precisely to a single composer let alone to a single work or a single measure. In his article, Gevaert argued that modern tonality was already well on its way by the time Glarean had expanded the traditional eight-mode system with the addition of the Ionian and Aeolian scales in the mid-sixteenth century. These latter two modes, Gevaert thought, emerged from consolidation of the other ecclesiastical modes and would eventually absorb those modes as our modern major and minor keys, containing within themselves "the germs of indefinite progress."<sup>8</sup>

Gevaert noted that there were even composers writing works that seemed to be in the Ionian mode some two centuries before Glarean expanded the traditional modal categories, thereby suggesting that modern tonality was already in formation. Indeed, as far back as the twelfth century, Gevaert points out, we can find motets in which major sixths resolve to the octave in many *clausulae*, commonly including the telltale tritone as an inner voice that Fétis held as the indisputable marker of modern tonality. By the mid-fifteenth century, we can see a Kyrie from Dufay's *Missa "Si la face ay pale"* displaying "distinctive traits of our major mode" that could not be mistaken by anyone. Example 3.4 shows the four excerpts Gevaert isolates from this work to prove his point.



The image displays four separate musical excerpts, each consisting of a grand staff with a treble clef and a bass clef. The first excerpt shows a vocal line in the treble clef with a melodic line and a bass line with sustained chords. The second excerpt features a more complex texture with multiple voices in the treble clef and a bass line with sustained chords. The third excerpt shows a vocal line in the treble clef with a bass line. The fourth excerpt shows a vocal line in the treble clef with a bass line. All excerpts are in a major-like tonality, as noted in the caption.

Example 3.4. Four excerpts of “major tonality” found in the Kyrie of Dufay’s Mass, “Se la face ay pale,” cited by Gevaert in *Le ménestrel* [November 22, 1868]: 402.

Gevaert’s transcription is actually drawn from Kiesewetter.<sup>9</sup> Kiesewetter, we should note, made no such claim on behalf of this music. Still, in the C-majorish diatonic transcription of Kiesewetter, Gevaert was certain the sprouts of modern tonality could be heard in the quasi-functional harmonies that he excerpted. Of course this was not the same thing as a work fully in the tonality of C major; it only suggested such a tonality. But that was precisely the point. Modern tonality, Gevaert insisted, did not emerge at one stroke phoenixlike in the history of music. It evolved slowly over many centuries and in many places. This is why it was also possible to hear premonitions of the new tonality in composers as widely separated as Dufay, Josquin, Lassus, Victoria, and Palestrina.<sup>10</sup>

None of these composers could be said to have solidified their tonal writing, but neither had composers just after Monteverdi, either. Gevaert

observed how throughout the first half of the seventeenth century, many composers and theorists seemed completely innocent of the unprepared dominant seventh chord. Remnants of the old modal tonality could still be heard in their compositions. It was not until the eighteenth century, he believed—and specifically the music of Sebastian Bach—that modern tonality can truly have been said to be “definitively fixed.” His conclusion was categorical: “It is no longer possible to date with precision the moment that the ancient tonality ended and when the new tonality began” (Gevaert, 414). The establishment of modern tonality was the result of a very long process of evolution and consolidation lasting some five hundred years from 1200 to 1700.

Of course Fétis could not let any criticism pass him by without a response, even at the age of seventy-four. Just one week after the last part of Gevaert’s article was published, Fétis inserted into the *RGM* a stern rebuke to his young compatriot chastising him for his general ignorance of music history.<sup>11</sup> All of the evidence Gevaert presented in his article pointing to an earlier nativity for tonality was dismissed by Fétis as amounting to nothing.

Gevaert was obviously not intimidated by this rebuke, though, for two weeks later, he responded with yet another lengthy letter rearticulating many of his earlier arguments.<sup>12</sup> Gevaert protested (quite correctly) that the esteemed historian (“whose age and immense work inspires in me the most profound respect”) did not adequately respond to his original arguments. Fétis simply reiterated points he had been making since 1835 without a single change. Gevaert again stated the same evidence he offered in his article for *Le ménestrel* a month earlier, urging Fétis to address the specific musical examples of early music in which clear attractive tendencies can be identified, particularly in the use of the chord of the sixth, re-fa-si.

What Gevaert found most frustrating, though, was Fétis’s continued obstinacy in seeing Monteverdi as the single discover of modern tonality. Let alone that such a claim flies in the face of the Caccini example he had just presented (and which, Gevaert reiterated, preceded by more than a decade Monteverdi’s fifth book of madrigals in composition), the notion that one man could effect such a change of musical style single-handedly was simply incredible. How could he possibly claim to have proven

that our tonality, this musical atmosphere in which we all breath, this crepuscule capable of containing the thoughts of a Bach or a Beethoven, that this essentially objective phenomenon is really the product of a single man? In that case, M. Fétis may be justly proud to have revealed to the world something completely unique and without parallel in the

annals of the human spirit. In that case, and in that case only, it will be interesting to know whether humanity will salute a new Prometheus by the name of Monteverdi or of Caccini.<sup>13</sup>

### IN SEARCH OF EARLY TONALITY

Gevaert clearly touched a raw nerve. For the picture Fétis had painted in his early historical writings about the *longue durée* of the *ordres unitonique* did seem suspiciously broad. Was it really possible to prove that all music before the seventeenth century lacked tonal tendency? That the most diverse genres of music ranging from plainchant through medieval organum and on to Burgundian polyphony, the Florentine madrigal, an English virginal pavane, and an Italian *frottola* were all constrained by a single, unchanging plainchant modality?

In his *Traité*, Fétis offered only a small sampling of the *unitonique* order to judge, all of it from the sixteenth century. Most of the works were drawn from Palestrina, the others being a toccata for organ by Claudio Merulo, the opening of a chromatic motet by Vicentino, and five measures of a madrigal by Marenzio (*Traité*, 153–64 *passim*).

One might wonder whether these last two works would have provided Fétis with some pause, given their marked chromaticism (and enharmonicism in the case of Marenzio). Might this chromaticism predate the employment of those affective tendency tones found in Monteverdi? Fétis thought not. Far from suggesting any kind of move away from plainchant tonality, he was sure that this music actually proved his thesis. Such chromaticism represented mannerist experiments testifying that the resources of plainchant tonality were now exhausted. Perhaps both Vicentino and Marenzio were groping for a new kind of musical language to supplant plainchant tonality, but neither of them possessed the vision or genius to effect a true transition: "They had begun the search for new means of expression, and tonal transition, of which they foresaw possibility, without having discovered the principle" (*Traité*, 164; *Treatise*, 162–63).

Still, all of this was meager evidence from which to deduce a sweeping vision of music history (though easy enough to do for just that reason). Despite the paucity of early music cited in the *Traité*, though, we must note that Fétis did have a good deal more music up his sleeve. Since he was a young student, he once boasted, he had been actively studying and transcribing all the specimens of early music he could get his hands on.<sup>14</sup> And he was able to profit from the efforts of colleagues such as Perne and Bottée de Toulmon, who were also busy transcribing older music. This repertoire ranged from the

earliest examples of discant from the twelfth century through multivoiced motets, chansons, and rondeaux of the thirteenth century and onward into the liturgical and secular works of Machaut, Landini, and numerous other Burgundian and Italian composers in the fourteenth century.<sup>15</sup> Little by little, some of these pieces were exposed in several of Fétis's earliest publications. Indeed, in the very first article in the debut issue of his *Revue musicale* published in 1827, he had offered readers transcriptions of music from Adam de la Halle (a three-part chanson "Tant que je vivrai" and a song from his pastourelle *Le jeu de Robin et Marion*).<sup>16</sup>

In this same year that he began showcasing some of his musicological research in his newly founded journal, Fétis published a work that can rightly be considered his first major study of music history. The occasion came when the Royal Netherlands Institute of the Sciences, Literature and the Fine Arts invited scholars in 1826 to contribute essays for a prize competition on the question, "What were the contributions of the Netherlands to the development of music in the fourteenth, fifteenth, and sixteenth centuries, and what influence did the artists of this country who traveled to Italy have on the schools of music that developed shortly thereafter?" Such competitions were commonly held by academies in Europe at the time even if few of them invited responses that were as obviously self-congratulatory as that proposed by the Dutch. And Fétis, then just forty-three years old and still known primarily as a *professeur de contre-point et d'harmonie* at the Paris Conservatoire, must have recognized this as a chance for him to draw together some of the research he had undertaken during the previous years and finally make a name for himself as a music scholar of international stature. He threw his hat into the ring and in quick order produced a *mémoire* on the question.<sup>17</sup>

In a breezy fifty-six-page march through the centuries, Fétis lists some desultory biographical information of composers with ties to the Low Countries, beginning with a brief background on medieval music. His essay rushes through the beginning of polyphonic music in Europe with some disparaging remarks about organum.<sup>18</sup> Nor did he see matters improving much in the following two centuries with the rise of discant and other kinds of early polyphony, with all their incessant dissonance and parallel part writing. While Machaut was credited with some improvement in compositional sophistication in the middle of the fourteenth century, Fétis found little to admire in what he saw in a manuscript of his mass housed in the Paris Royal Library. During this long, dark period, only a few composers, such as Adam de la Halle, left behind music containing any real touches of grace. It was toward the end of the fourteenth century ("around 1370") that we finally see the first real signs that polyphonic music in Europe was beginning to move beyond

the musical barbarities of the medieval period. Three composers in particular were cited by Fétis as having truly moved music forward in both harmony and notation in the fifteenth century: Dufay, Dunstable, and Binchois (*Mémoire sur cette question*, 12). This then led to the flourishing of several Flemish masters in the later fifteenth century: Okeghem, Obrecht, and Josquin, followed in the sixteenth century by Gombert, Arcadelt, Willaert, Verdelot, and Lassus. Overall, some thirty composers and their works are mentioned by Fétis in his essay. Significantly, Fétis also included substantial discussions concerning a number of music theorists, including Hucbald, Guido, and Franco from the Middle Ages and Marchetto, Glarean, and Tinctoris as later worthies in the “science” of music. Fétis saw a growing musical sophistication evident over these centuries culminating in the polyphonic practice of the sixteenth century, whose Italian masters seemed to have learned much of their art from the *oltremontani*. And while it cannot be said that this *Mémoire* offered a particularly coherent, let alone comprehensive, story of early music history, in its patchwork quilt of biographical anecdotes and bibliographical information (though not a single note of music!), it is clear that a scholar of uncommon erudition had made his entrance.

But Fétis was to meet his match. For it turns out the Austrian music historian Raphael Georg Kiesewetter (1773–1850) had also submitted an entry of far greater ambition to the academy.<sup>19</sup> At 115 pages, his text was fully double the length of Fétis’s *Mémoire*, and it also included a seventy-four-page supplement of musical examples (even if most of the examples were drawn from Burney, Hawkins, or Forkel). While Kiesewetter covered all of the same composers that Fétis had, he also devoted more space to discussing—and illustrating—particular compositions by many of his composers.<sup>20</sup> Josquin, not surprisingly, received top billing. Most importantly, though, Kiesewetter flattered his Dutch patrons by extolling the unique genius of the Netherlanders in their underappreciated role in the development of European music. This might have been easy to do—and perhaps even expected—for an Austrian. After all, much of the southern Netherlands had earlier been a part of the Austrian Hapsburg Empire, and the Dutch were considered by German scholars of the time to be part of a general pan-Germanic culture in northern Europe.<sup>21</sup> For his part, Fétis felt it necessary to gently remind his Dutch readers of the Gallic roots of much Burgundian music.

It is not difficult to observe in these rhetorical ploys some strong political undercurrents. As Belgium had not yet shaken off the yoke of its Dutch overlords (the revolution that led to the independence of Belgium would only take place two years later in 1830), Fétis was obviously keen to score some points on behalf of his compatriots. At the risk of antagonizing the Dutch

academicians who were adjudicating the prize competition, Fétis appealed to the more enlightened instincts of his readers to recognize greater inclusivity in this story.

What! How could we hesitate in this essay not also to include the names and the happy accomplishments of the most illustrious Belgians? Here, as in the rest of this *Mémoire*, there is no need to resort to fiction in order to exalt the merit of obscure writers or imaginary great men. No theory or history should ever be twisted in order to flatter the prejudices of the historian or the vanity of a people.<sup>22</sup>

Still, it seems Fétis could not resist a little flag-waving of his own Walloon heritage by pulling some of the Burgundian musical legacy away from the Dutch and securing it more tightly within a French-Belgian orbit by consistently extolling the accomplishments of his fellow “Gallo-Belges” theorists and composers.<sup>23</sup>

The result was predictable. To the great chagrin—and everlasting bitterness—of Fétis, Kiesewetter was awarded the gold medal from the Dutch academy. This competition would be only the first of many times Fétis would find himself crossing swords with Kiesewetter, who remained a lifelong rival. The two would exchange regular rounds of verbal fusillades over the following two decades in their respective publications.<sup>24</sup> But Kiesewetter would also serve a useful role by prodding Fétis to sharpen many of his arguments in his subsequent musicological research.

Like Fétis, Kiesewetter began with a small repertoire of early music on which he based his own history of music. (Most of the musical examples contained in his submission to the Dutch academy in 1827, as mentioned, were drawn from earlier historians; and those before the fifteenth century were almost all gathered from theoretical writings.) In his history of Western music published in 1834, he tried to open this window a little bit more.<sup>25</sup> Based heavily on the information—and model—he gleaned from Baini’s history published a few years earlier, Kiesewetter paints a progressive history of harmonic development centered on consecutive “epochs” in which a single composer (or theorist) stands as representative: Hucbald (tenth century), Guido (eleventh century); Marchetto (1300–80), Dufay (1380–1450), Ockeghem (1450–80), Josquin (1480–1520), Willaert (1520–60); and Palestrina (1560–1600).<sup>26</sup> To be sure, Kiesewetter faced the problem of any other historian at the time: how to decipher the notation of medieval polyphonic music (“die ältesten Monumente eines figurirten Contrapunctes”). But he gave it a good try, transcribing eight pieces of polyphonic music written before 1500 in an appendix.

Among these were selections by Dufay, Binchois, Eloy [d'Amerval], Regis, Faugues, and Ockeghem. He also included two of Fétis's earlier transcriptions of pieces by Adam de la Halle and Landini.

Kiesewetter was in some ways a more sympathetic listener to early music than was Fétis. He was sure that medieval music was more varied than the picture Fétis was suggesting and that it contained many more moments of artistic inspiration. While he shared Fétis's strong repugnance for the earliest attempts at polyphonic singing in the repertoire of organum and discant, he believed that a few composers, starting with Machaut, were beginning to find means for expressing real musical art—at least in fleeting moments. (Fétis never seemed to warm up to Machaut, feeling him distinctly inferior to his Italian contemporaries.<sup>27</sup>) Kiesewetter also seemed more sensitive than Fétis to the tonal diversity of this music, a diversity that belied any notion of a monolithic “unitonique” culture of composition.

Most significant for our story, Kiesewetter expressed doubts that the emergence of the modern system of major and minor keys can be credited solely to the early seventeenth century (“Epochs of Monteverdi and Carissimi”). He was certain that strong premonitions of it could be detected already in the sixteenth century.<sup>28</sup> More strikingly, perhaps, he wondered why the tonalities of vernacular song (“tonalitäten des Volksgesanges”) in the Middle Ages did not always correspond to the traditional church modes. In an article on secular folk song written in 1838, Kiesewetter noted that a number of troubadour and trouvère melodies seem to have been conceived within our “modern key system” (Kiesewetter never seemed comfortable using the term *tonalität* in his own writing):

The reader . . . will not be in doubt that throughout [these pieces] our so-called major or minor keys may be unmistakably recognized. Also, it will be seen how the modulation of the major key is sometimes to the dominant, and sometimes to the submediant, while modulations from a minor key will be seen to the minor subdominant and the major mediant.<sup>29</sup>

This observation was further confirmed by Kiesewetter in his analysis of some dozen secular songs that he found transcribed by Burney, Perne, La Borde, Bottée de Toulmon, and (ironically) Fétis. These included chansons by Chastelain de Coucy, Thibaut de Navarre, Adam de la Halle, and even two chanson melodies by Machaut.<sup>30</sup> Three years later, Kiesewetter undertook a more rigorous study of early vernacular music in an attempt to trace the pre-history of opera. And again, his analysis confirmed the presence of major and minor keys long before Monteverdi first came along.

It is noteworthy that these authentic folk songs . . . exquisitely display the special character of each of the keys that we today call major and minor and (incorrectly) call the “new keys.” The true, unsullied sense of the folk that one may reasonably call an instinct has taught the musically unlearned poet and inventor of the Lied each of these keys, upon which our entire system of contemporary music is completely based.<sup>31</sup>

Kiesewetter never denied that something quite new had taken place in music history at the beginning of the seventeenth century. But the evidence he heard in some of these secular melodies suggested unequivocally that this so-called system of new keys had earlier precedents than Fétis’s rigid categories allowed. Other scholars were also coming to the same conclusion.

### COUSSEMAKER AND THE FOLK ORIGINS OF TONALITY

Charles Edmond Henri de Coussemaker (1805–76) is one of the most fascinating protagonists in our story. Born in Bailleul (a Flemish enclave in the Nord Pas de Calais), Coussemaker studied law and rose to the ranks of a respected jurist in Lille. He also became known as a learned local historian. Coussemaker was a fierce advocate of Flemish culture, taking particular interest in the poetry and song of western Flanders, about which he published a number of studies. (We will be looking at some of his work in this area in chapter 4.) But it was medieval literature and music that was his greatest passion.<sup>32</sup> Bringing to the musical texts and manuscripts he would study an acute analytic mind combined with strong linguistic and philological skills, Coussemaker would soon become the first major authority of medieval music in the nineteenth century. It was perhaps inevitable that Coussemaker’s growing reputation as a scholar of this music would entail the jealousy of Fétis and generate a number of acrimonious exchanges between the two.

In 1852, Coussemaker issued a study that would have a major influence on the tonality question and indeed the entire history of early music. His *Histoire de l’harmonie au moyen âge* was the first full-scale study of medieval music published in the nineteenth century, far eclipsing in scope and detail the desultory contributions of Choron, Fétis, and Kiesewetter. His book contained a large number of transcriptions (“monuments”) in the appendix of music from the ninth through the fifteenth centuries. Among the many examples of polyphonic music, we find some organum, two and three-part discant, motets, and several multivoiced roundeaux and chansons.

Coussemaker understood that in order to decipher the notations in



which much of this music was written, one first had to study the writings of coeval music theorists (or “dacticians” as he called them). His work thus included editions (“documents”) of several important theory treatises that help to explain the reading of ligatures and mensuration signs. Among the treatises included are the organum treatise *Ad organum faciendum* from the twelfth century and several discant treatises, including the *Discantus vulgaris positio* and John Hothby’s *La Caliopea legale*. These editions can be seen as forming the foundation of his monumental four-volume series of theory treatises, the *Scriptorum de musica medii aevi*, that would begin to appear twelve years later.

It is of no dishonor to Coussemaker to acknowledge that many of his musical transcriptions, like those of Fétis or Kiesewetter, have their faults. With all his obvious erudition, there was still much that Coussemaker did not understand about the deciphering of medieval notation. However, as a pioneering document, it was Coussemaker’s *Histoire* that gave scholars their first panoramic view—and hearing—of a far wider and more comprehensive range of medieval music than hitherto available. Particularly for the intricate polyphony of the thirteenth and fourteenth centuries, with its enigmatic rhythmic notation, Coussemaker made the first decisive breakthrough in translating these works into modern notation. (Interpreting mensural notation was one of the topics about which Coussemaker and Fétis regularly quarreled.)

Another problem Coussemaker attempted to solve in his study was that of *musica ficta*. We have seen in the previous chapter how much confusion there was about this topic in the early nineteenth century. Having a number of theory treatises to aid him, however, Coussemaker was beginning to get a better sense of when and where these alterations might have worked in practice.<sup>33</sup> Ever so tentatively, he added a few of these accidentals to his musical transcriptions. But he felt the need to tread cautiously, for already other editors were piling on the sharps and flats with seeming abandon in their own editions.

Kiesewetter is a good example. In his 1827 submission to the Dutch academy, our Austrian editor was liberally introducing accidentals into his transcriptions of fifteenth-century music that he insisted needed to be sung by singers. In example 3.5, we can see an example of such editing in an excerpt from a four-part chanson by Johannes Regis published by Petrucci in 1503. A note at the end of Kiesewetter’s transcription makes it clear that most of the accidentals in the score have been added by himself: “The # or b that I have added in various places seem to me to be of indispensable necessity.

4.) J. Regis Aus dem Canticente-cinquante. Von Petrucci 1503. Kiewetter

\* Hier an den mit \*bezeichneten Stellen sind # oder ♯ im Original angezeigt.

Example 3.5. "S'il vous plait," by Johannes Regis, transcribed in Kiewetter, *Die Verdienste der Niederlaender um die Tonkunst*, *Musicalische Beilagen*, 62.

The annotation at the bottom alerts the reader that only the accidentals marked by an asterisk are found in the original manuscript.

That given, one is astounded by the cleverness of modulation at such an early time.<sup>34</sup> In just the six measures of example 3.5 we can see Kiewetter adding no less than twelve differing accidentals to this piece of music.<sup>35</sup>

Yet by introducing all these accidentals, and particularly the sharps, weren't singers (or worse, editors) adding appellative tendency tones? In other words, weren't those accidentals suggesting that this music was closely approaching modern tonality—something that Kiewetter hints at in his note?<sup>36</sup> The question was a sensitive one for Coussemaker, but it was not because he was certain that any sign of modern tonality would have been inconceivable in the Middle Ages. On the contrary, it was because he was beginning to suspect that modern tonality was then very much alive and well. But it would not be in a four-part chanson from the sixteenth century that we would find either the earliest or the most conspicuous examples of this tonality.

Coussemaker began to observe that in many folk songs from the thirteenth and fourteenth centuries, features of "our own" modern tonality kept making an appearance. (This was a point we saw Kiewetter had also suggested.) Could this evidence prove that Fétis's reign of plainchant tonality in the history of early music was not as universal as claimed?

All the authors who have written about music from the Middle Ages have insisted that the popular and profane songs of the Middle Ages were based on plainchant tonality. It is an error that we ourselves were guilty of. But after a careful examination of the melodies of the time, we have reconsidered [our position].<sup>37</sup>

Coussemaker's reconsideration led him to the realization that these songs were not only written in a tonality that seemed related to our modern tonality but that—pushing Kieseletter's tentative suggestion to its ultimate consequence—these songs may very well have been the origin of modern tonality:

It is of the utmost importance to recognize that the tonality that we call modern, and which is not revealed in the harmony of art music until the end of the sixteenth century, has an origin that cannot be fixed chronologically, since we find its essential character in ancient melodies long preceding our own. Can we not then rightly conclude that the melodies of songs dating even before the ninth century were constituted in the same tonality? That is our view. This means that even in the darkest period of the Middle Ages, there was a popular music that was distinct from plainchant in two essential ways: measured rhythm and tonality.<sup>38</sup>

The last point Coussemaker makes about measured rhythm is important. Fétis, too, had noted how modern tonality seemed to be so often conjoined with regularized meter in its earliest phases.<sup>39</sup> It may not have been sufficient, then, simply to have melodies based on scales approximating our major and minor systems in order to establish modern tonality. Somehow, the metrical animation of a melody was also critical for providing the phrasing and cadential articulation necessary to establish a clear pitch hierarchy.

Coussemaker cited four specific pieces in his *Histoire* that showed this metrical-tonal symbiosis in early medieval secular music: an *air de danse* from the thirteenth century ("in D minor"); a song from the end of the thirteenth or beginning of the fourteenth century ("in G major, where a F# indicated by the composer or copyist leaves no doubt about its tonality"); a song from the fourteenth century in two voices ("where the tonality of C major is perfectly established"); and a three-voiced discant from the fourteenth century ("in G minor").

Example 3.6 reproduces the second of these pieces, an anonymous song "in G major" titled "Main se leva sir Garins."<sup>40</sup> While a sharp on F4 is given ("by the composer or copyist") in bar 5 indicating a G major tonality, Coussemaker marks four other places where the same sharp should be added by the singer. (For reasons he does not explain, Coussemaker does not indicate changes on the F4 at the end of the fourth system and at the beginning of the eighth system.)

Coussemaker reads the tune as a clear example of a Garlandian first rhythmic mode and thus transcribes the ligatures into a series of largely trochaic feet. For Coussemaker, signs of modern tonality abound in this work.

**39. — MAIN SE LEVA SIR GARINS.**  
(Voir le fac-similé, planche XXXII.)

Main se le - va si - re Ga - rins, Li dom sa dé - - clos  
son jar - din, Vers le mou - lin de les les bos Si vit la ro -  
- sé - - - e D'un pe - tit piet de pas - sé - e, Dit que  
femme est là pas - sé - e, Si fuit les es - clos; au mou - lin vient le ga -  
- los si la treu - vé - - e, A briés mos la si ac -  
- cor - dée, Que par sem - blant es - se - vie - - e, Can - ta sou los: qui mour -  
- ra m'a - vai - ne li - mo - lins est clos. Lors li dit Ga - rins: A - bré - e, Soy - ons  
d'un ac - cort; Car cor n'est la gent le - vée et li vi - lain dort.

Example 3.6. Anonymous Chanson “Main se leva sire Garins”  
dating from “the late thirteenth or early fourteenth century”  
in Coussemaker, *Histoire de l’harmonie*, plate 32, xxxvi.

There is a strong triadic outline to the melody, while G is continually circled as the prominent cadence point, and secondary cadential points occur on notes of the dominant harmony (D).<sup>41</sup> All in all, “Main se leva sire Garins” is telling evidence for Coussemaker that many popular songs of the Middle Ages were conceived in a tonality that closely approximated our modern tonality. And it was evidence that was confirmed in other sources too.

In 1851, Théodore Nisard (aka Theodule Normand) announced the “discovery” of a fabulous manuscript collection of medieval polyphonic music in the Bibliothèque de médecine located in Montpellier. Known today simply as the “Montpellier Codex” (or to medieval specialists as Mo-H196—and not to be confused with the antiphonary Mo-H159 discussed in chapter 2), the manuscript contains the greatest trove of thirteenth-century polyphonic motets collected in a single source.<sup>42</sup> While its discovery was too late to consider in his 1852 publication, Coussemaker realized that Nisard had stumbled on gold and devoted a subsequent study wholly to this source in a large book that appeared in 1865 titled *L’art harmonique aux XII<sup>e</sup> et XIII<sup>e</sup> siècles*. And once again, our Flemish musicologist enlisted coterminous theory texts to aid him in deciphering the complex mensural notations he found in this daunting manuscript. His transcriptions were good enough that they were



Figure 3.1. Monument to Coussemaeker located in Bailleul, France.  
Photo by the author.

cited by scholars throughout the nineteenth century and indeed well into the twentieth century.<sup>43</sup>

As in his *Histoire* from 1852, the question of *musica ficta* was raised once again in *L'art harmonique*. This time, Coussemaeker had found a new theoretical source to help him understand these unnotated accidentals: an anonymous thirteenth-century discant treatise from Saint Dié that began with the incipit “*Gaudent brevitare moderni*” and that he included as “Anonymous 2” in the first volume of his edition of theory treatises.<sup>44</sup> Drawing heavily from

the theories of Franco, the author of this very short and practical treatise on mensural notation and discant adds an original section on *musica falsa* in which chromatically altered notes are ascribed, respectively, to necessity (*causa necessitatis*) and beauty (*causa pulchritudinis*). The latter usage, the anonymous author tells us, is associated with the *cantus coronatus* (crowned or prizesong), a monophonic genre first cited by Johannes de Grocheo and often ascribed to trouvère competitions.<sup>45</sup>

This testimony helped to persuade Coussemaker that accidentals played a very differing role in sacred polyphonic music than they did in secular monophonic practice. Whereas in polyphonic music, a sharp would be introduced by singers to avoid forbidden intervals, particularly at cadential points (*causa necessitatis*), in secular song, it could be used solely for its beauty and tonal character. This meant for Coussemaker that the accidentals in the sacred repertoire did not have the tonal meaning they did in secular song. "As for the usage of dissonances [in this sacred repertoire], there is nothing that suggests a tendency towards the tonality called modern."<sup>46</sup>

Reiterating the thesis he first enunciated thirteen years earlier, Coussemaker was now convinced that there were two differing and completely separate types of tonality simultaneously to be heard in the Middle Ages: an ecclesiastical (plainchant) tonality, and a "modern" tonality of secular song. Far from *ficta* infecting polyphony with the virus of modern tonality, then, the added sharps sung by singers in the church ultimately helped to sustain the older tonality. It was in secular song that the raised seventh really conveyed something of the appellative character of a leading tone. "One can thus consider chromatic intervals introduced in harmonic music under the name of '*musica ficta*' [*musique feinte*] as the beginning of a battle that would soon pit the tonality of popular music against the tonality of plainchant, the only (tonality) admissible as an artistic foundation."<sup>47</sup> But if this was indeed a battle between the two rival tonalities, it ended not in the triumph of one over the other as much as a complete separation between the two (101).

In Coussemaker's view, the richest trove of such prototonal music was to be found in the melodies of the trouvères active in northern France and Burgundy during the later thirteenth century and specifically in the songs of Adam de la Halle. While Bottée de Toulmon and Fétis had already transcribed a number of Adam's songs, it was Coussemaker who took the lead in championing his music as an underappreciated patrimony of northern art. This activity culminated in 1872, when Coussemaker issued a "complete edition" of the works of "Le trouvère de la Halle," celebrating him not only as a true bard of the popular folk but as an exemplary representative of the northern spirit that seemed to have bequeathed modern tonality to us.<sup>48</sup> In analyzing

A-dan mout fu A - ris - to-te sa - chans,  
 Et si fut il par amours tes - me-  
 nes Qu'en ce-le fu com - me che - vaus fer - rans.  
 Et cheveu-chiés en - si que vous sa - vés Pour che-li  
 que il vo - loit à a - mi - e Qui en le fin cou-  
 vent ne le tint mi - e Vauriés vous

Example 3.7. "Adan mout fu Aristote sachans" in Cousse-maker, *Oeuvres complètes du trouvère Adam de la Halle*, 167.

the monophonic songs that had come down from the hand of Adam—in particular those from his pastourelle *Le Jeu de Robin et Marion*—Cousse-maker found melodies with unmistakable tonal pedigree.

Example 3.7 offers one example of a song by Adam in a "ton majeur." Particularly noteworthy about this song, "Adan mout fu Aristote sachans," was the clear authentic ambitus of the melody, its strong triadic outline, and phrase endings either on a dominant harmony or on the tonic F.<sup>49</sup> (The "secondary" leading tone below C in bar 16 of his transcription is a particularly telling indication of modern tonality, Cousse-maker notes, suggesting a local modulation to the dominant.) The conclusion was clear: alongside the "official" tonality of the church, there was a popular tonality of the people that was practiced simultaneously. Unlike the sacred tonality that was suited to the "calm" and "majestic" character of Christian chant, the latter tonality was appropriate for the "worldly passions" of the people.<sup>50</sup>

As to confirm his theory about the vernacular roots of tonality, Cousse-maker noted that in another song of Adam "in the tonality of G," the composer adds sharps on F even though this creates a discernable tritone against a C heard prominently in an earlier measure. Instead of adding the accidental to avoid a tritone, then, the composer adds a sharp that has the effect of highlighting precisely the defining interval of modern tonality!<sup>51</sup>

Some twenty-five years after Cousse-maker produced his edition of Adam's *Oeuvres*, the music ethnographer Julian Tiersot revisited *Le jeu de*

*Robin et Marion* to make a “performing edition” of the music. (Tiersot actually staged the modern “premier” of the work in 1896.) And he agreed with Coussemaker that these songs irrefutably prove a vernacular origin to modern tonality long before the terminus post quem set by Fétis.<sup>52</sup>

In regard to the question of tonality, these melodies [of Adam] present a particularity that is of unending interest. They are nearly all in the major mode. Note well how these are from the thirteenth century, an epoch where the theoreticians recognized no modes other than those of plainchant and in which the most learned of our historians uphold the inexact thesis that modern tonality (that is to say, the substitution of major and minor scales for the ancient modes) was a result of harmonic progress and emerged in nearly every work only in the seventeenth century thanks to a musician of genius. But nature is above this pretty theory, and as modern tonality is simply the natural tonality, it will not be a surprise to learn that the singers of popular songs waited for the permission neither of Monteverdi nor Fétis in order to sing in major.<sup>53</sup>

As we see from this quote, the thought that vernacular music of the Middle Ages might well have been the incubator of modern tonality continued to gain adherents after Coussemaker. François Gevaert, whom we just heard from earlier in this chapter, was one of the strongest champions of this thesis. He agreed strongly that the trouvère repertoire tended toward our major keys (in a “*mélopée nouvelle*”) with clear articulations of a central tonic.<sup>54</sup> This made perfect sense to Gevaert, since he was sure that this was the living musical tonality of the common folk. Just as the church used the Latin language, which was no longer spoken, in its liturgy, so, too, was its music increasingly alien to the vernacular ear.

Despite Tiersot’s claim that medieval theorists only recognized church modes, there were actually some tantalizing suggestions by a few coeval theorists that there were alternative tonalities to the traditional system of modal classification. In a source that was unknown in the nineteenth century, the thirteenth-century theorist Johannes de Grocheio offered one famous description of secular music (*musica vulgaris*—or “the music that people make use of in Paris”).<sup>55</sup> In his discussion of various genres of secular songs and dances such as the *ductia* and the *stantipes*, Grocheio mentions that they cannot be classified using the traditional church tones. And while Grocheio did not tell us exactly what kind of tonal system this “*musica vulgaris*” followed, he gave us a telling hint when he noted that such music often used *musica falsa*.<sup>56</sup> Quite possibly, then, the secular dance music that Grocheio



observed employed accidentals that altered the church modes into something that we might recognize today as close to our major or minor scales.<sup>57</sup>

This was a thought that continued to be voiced through the beginning of the twentieth century by French scholars. Pace Fétis, Tiersot saw the growing imposition of the leading tone through the backdoor of *musica ficta* as the Trojan horse by which modern tonality came to undermine the medieval modes. He concluded,

Modern tonality, which is to say, the substitution of major and minor scales in place of those of antiquity and the Middle Ages, far from having taken place in a day and the product of a single musician of genius, is instead the product of a long evolution that extends over a great number of centuries. The sharp and the flat were the principal agents of this destruction.<sup>58</sup>

The musicologist Pierre Aubry also heard in the sharps of *musica ficta* the “attractive” energy of the modern leading tone:

But *musica ficta* caused further havoc in the ancient tonality. It introduced a notion that seems never to have existed before, that of the *sensible*. Below the final of any Gregorian chant (excepting those in the *tritus* modes), there was always placed a whole tone. The semitone, on the other hand, is characteristic of the modern major and minor [tonality]. . . . It thus appears that innovations of *musica ficta* in the thirteenth century paved the way for the modern major and minor modalities. The fulfillment of this transformation, which is woven into virtually the whole history of the music itself, is the result of secular effort.<sup>59</sup>

Coussemaker, as we earlier observed, insisted that these earliest omens of modern tonality were the exclusive province of secular music making, while sacred music remained firmly entrenched in the ecclesiastical modes. But at other times, he wavered on this point and wondered whether the origins of modern tonality might have more to do with geography than genre. Like Fétis, Coussemaker could not ignore how so much “northern” music (such as the songs of the *trouvères*) evinced such progressive tonal qualities. Perhaps it was with the “peoples of the north” that we should locate the origins of tonality.<sup>60</sup> This might support his suspicion that much of the original Gallic chant that was repressed under Charlemagne possessed a tonal character far more “modern” than the Roman chant that replaced it (99–100).

Supporting the “northern” thesis of tonality was a work that had already

received considerable exposure by earlier historians of music, including Burney, Hawkins, Forkel, and Kiesewetter: the famous English canon on the text “*sumer is icumen in*.” Coussemaeker could not resist including a transcription of this work in his book, no doubt to seal his case for the northern origins of modern tonality.<sup>61</sup> He dated the canon as originating somewhere in the thirteenth century. The canon’s diastolic oscillation between F major and G minor chords seems to be a model example of the rich, full-blooded triadic sonorities so beloved by the English.<sup>62</sup> If Coussemaeker was disconcerted that this work moved the origins of modern harmony a bit farther northwest into the British Isles than our proud Flemish editor might have wished, there is no evidence of it. For England, France, and Burgundy seemed all apiece of the general septentrional world that gave birth to modern tonality.

Coussemaeker was not the first to observe that England seemed to be home to a special kind of harmonic sensibility. Already in the early fifteenth century, Martin le Franc had famously described the music of Dunstable as representative of a *contenance angloise*. He was not clear exactly what he meant by this enigmatic modifier, but given that the music he was indexing was that of his confreres Binchois and Dufay, it is reasonable to conclude that their taste for rich chordal sonorities filled with imperfect consonances must have been a chief aspect of *contenance angloise*.<sup>63</sup> As the Summer Canon attests, it was a predilection with deep roots.

Other evidence for a growing northern partiality for chordal sonorities can be found in the practice of “English discant.” This was a practice of singers improvising imperfect consonances alongside a melody in parallel motion using a system of “sights” that became popular in the fifteenth century. It was a practice found on the continent under the name of *fauxbourdon*, while in England it was sometimes called *faburden*.

It was actually the German musicologist Hugo Riemann who first drew attention to the practice of fifteenth-century fauxbourdon, seeing it as an “intuitive recognition of triadic harmony” that finally led to the establishment and recognition of modern tonality several centuries later.<sup>64</sup> Indeed, for Riemann, the whole history of harmonic (modern) tonality is one that began as early as the fourteenth century in the practice of northern singers from England and Scandinavia who would improvise imperfect consonances below their folk melodies, a practice he (erroneously) labeled as *gymel*.<sup>65</sup> But several musicologists before Riemann were already zeroing in on the fifteenth century as the real turning point in European music. Gevaert and Ambros both seemed to recognize that something important was happening in the fifteenth century, if not a bit earlier, that suggested here—and not the *seconda pratica* two centuries later—lay the origins of our modern tonality.

## A TWENTIETH-CENTURY EXCURSUS

While I have so far avoided bringing more recent musicological voices into the conversations I have been recording in this book, it will be instructive to pause a moment now and to hear what some of them have to say. Specifically, I want to look at the views of several (mostly German) musicologists active in the 1950s and 1960s who grappled with the question of the origins of modern tonality in early music. Why this question reared its head then and there I will consider in a moment. For now, let me emphasize that it is not my intention to cite their work in order to resolve once and for all many of the questions we have heard debated in this chapter regarding the dating of tonality's birth. Rather, I find it fascinating that many of the same controversies we have just been hearing about were still alive over a century after they were first given air. And for some of these later musicologists, the stakes seemed even higher.

Before I turn to look at some of this literature, though, we should not fail to recognize that already at the turn of the twentieth century there were discussions about the origins of harmonic tonality among German scholars.<sup>66</sup> If, as Alexander Rehding shows, much of this discourse was more generally about the origins of music tout court, the question of tonality, or perhaps more accurately, harmony, emerged as an important secondary issue. With the benefit of historical hindsight, we are not surprised to find many of these German writers echoing the thesis already articulated by Coussemaker regarding the northern origins of harmony even if some of them pushed back the dating of this event a millennium or two.<sup>67</sup> Still less are we surprised to see how many of the same writings were beginning to tout a particularly vile strain of nationalist and racial rhetoric that would become depressingly familiar after 1933, with all their fanciful tales about blond-haired, steely jawed Nordic hunters calling to one another across the plains of Germania with pairs of lurs and thereby discovering the harmonic intervals of the natural overtone series.<sup>68</sup> By the end of the 1930s, the corruption seemed almost irredeemable. German musicologists writing under the Nazi imprimatur such as Richard Eichenauer, Oskar Fleischer, Fritz Metzler, Hans Joachim Moser, and Joseph Müller-Blattau published sober, scholarly looking writings that purported to demonstrate how the manly major and minor tonality of Western music was a uniquely Aryan heritage and categorically opposed to the effeminate Semitic modal legacy of southern music.<sup>69</sup> It is little wonder that with the end of the Second World War, this German triumphalism regarding the Nordic origins of harmony and tonality fell resoundingly still.<sup>70</sup>

Yet it is interesting that beginning in the 1950s, as German musicology

began its slow process of recovery and rehabilitation, many of the same questions about the origins of musical tonality were raised again, if in a more cosmopolitan way and scrubbed (mostly) of any German chauvinism and appeals to Nordic sensibilities for harmony. We might situate the beginning of this “second” twentieth-century phase of the debate with the publication in 1950 of Heinrich Bessler’s study *Bourdon und Fauxbourdon: Studien zum Ursprung der Niederländischen Musik* and ending some two decades later with the publication of Carl Dahlhaus’s habilitation thesis *Untersuchungen über die Entstehung der harmonischen Tonalitäts* from 1968. In the two decades between these two landmark books, some dozen scholars argued with one another in a series of articles and monographs regarding the nature of harmonic tonality in late medieval and Renaissance music. Among the major participants were a few who had made their name in German musicology in earlier decades, including Rudolf von Ficker, Manfred Bukofzer, Willi Apel, Hans Moser, Joseph Müller-Blattau, Friedrich Blume, Walter Wiora, and of course Bessler himself. Others were younger colleagues new to the profession (and in many cases, students of the older generation). They included Wolfgang Marggraf, Paul Beyer, Ernst Apfel, Thrasybulos Georgiades, Edward Lowinsky, and Dahlhaus, to name only the most prominent.<sup>71</sup> Not since the days of Fétis, Coussemaker, and Gevaert was the problem of tonality’s origins debated with such intensity by musicologists.

Let us first review Bessler’s thesis. As the full title of his book already hints, he believed that the practice of continental fauxbourdon was one of the major contributors to a harmonic language that eventually gave way to our system of harmonic tonality. The improvising (and later notating) of fourths and sixths underneath a fixed melody, he was sure, became a means by which a sensibility to harmony was inculcated by fifteenth-century musicians, a sensibility that would open the path toward modern tonality. But it was only one tributary. Bessler laid out a number of musical features that coalesced over the course of the early fifteenth century in differing parts of Europe that he believed collectively contributed to the establishment of modern harmonic tonality. Besides the practice of fauxbourdon, there was a “dominant” tonality cultivated by early quattrocento composers such as Ciconia in which fifth-based melodic material is present and developed in various lied forms. And then there was the addition of a contratenor to the two-part scaffolding of many Burgundian compositions that acted as a “harmonic bearer” (*Harmonieträger*). This contratenor (*Bourdon-Tiefstimme*) became the harmonic foundation on which incipient functional harmonies could be constructed. All of these features—fauxbourdon sonorities, dominant tonality, bass-oriented chordal structures, and protoharmonic function-

ality—were brilliantly realized and synthesized in the music of Dufay, who stands for Bessler as the true Promethean father of tonality:

That which is thrust into light here is a new feeling for harmony, a strength and security of triadic connection, which surpasses all previous examples. The chords no long stand next to each other as individual colors, but rather, [in] coming into motion, they fashion an inner cohesion, flooded with the power of sensitivity, which instantly becomes intelligible to us as harmonic “tonality.”<sup>72</sup>

Rudolf von Ficker agreed that fauxbourdon was an important part of the development of tonality, a practice he traced to an older English practice of discant and sometimes labeled as *faburden*.<sup>73</sup> But for Ficker, the real location of harmonic tonality lay in the tenor-discantus scaffolding (*Gerüstsatz*) that formed the outer voices of most polyphonic practice of the time. Bessler’s contratenor, Ficker argued, was always an afterthought added by the composer (or singer) to an original, two-part scaffolding; it could never be understood as the harmonic foundation of a structure that preceded it conceptually. By viewing most polyphonic music as essentially built around such a two-voiced “primary structural framework,” Ficker thought he could better explain the sense of directed motion that music of the fifteenth century began to project. The key here was the well-known directive that the penultimate interval in an octave cadence would be a major sixth (and by inversion, a minor third for a unison cadence) moving in contrary motion to resolution with at least one of the voices traversing a semitone. To achieve this semitone connection, the penultimate imperfect consonance often needed to be altered by an accidental (*musica ficta*), resulting in a note that he earlier had called a “subsemitonium.”<sup>74</sup>

For Ficker, then, the semitone clausula was the earliest manifestation of the leading-tone principle and could be said to be, more than any other, the formative element of modern tonality. (One hears here echos of Fétis.) Bessler, it should be noted, did not doubt that the drive to an octave cadence was indeed a fundamental constituent of incipient tonality and Dufay one of its leading exponents. But again, it was only one such constituent. In contrast to Ficker’s monistic thesis, Bessler instead argued for multiple elements coming together to form tonality.

The two positions of Bessler and Ficker, if not entirely opposed, did represent two distinct camps within which other musicologists would coalesce in the following decades. Bessler’s theory, for all its eclecticism, emphasizes chordal factors as a key element in the emergence of modern tonality. It was

a perspective that was echoed by students of Bessler, including Edward Lowinsky and Manfred Bukofzer. Ficker's thesis, on the other hand, tends to emphasize linear elements in understanding tonality. It too had its adherents who took up the cause, including his own student, Thrasybulos Georgiades and to some degree by a second generation of musicologists, including Bernhard Meier, Ernst Apfel, Richard Crocker, and Carl Dahlhaus.<sup>75</sup>

Armand Machabey is a music historian who deserves a brief mention here. As one of the few French musicologists to jump into this debate, we won't be entirely surprised to learn that he gave a bit more credit to French (or more strictly Burgundian) composers for the first major steps toward tonality.<sup>76</sup> He particularly emphasized the contributions of Machaut to this development. Machabey's views actually were not all that different from those of Coussemaker a century earlier when he declared categorically that "the cradle of *tonalité moderne* appears to be in France, to which we add England and Belgium" (40). Later he expressed this more forcefully (and chauvinistically):

If we except Guido of Arezzo, one sees that there is no need to leave the region of Paris and its territories north of the Seine in order to follow step-by-step the formation of tonality and the various formulas through which it is expressed.<sup>77</sup>

It was against this background that an interesting monograph appeared in 1961 written by Edward Lowinsky, a student of Bessler who had immigrated to the United States in 1940. With a title that betrays the author's modernist agenda, *Tonality and Atonality in Sixteenth-Century Music*, Lowinsky made a case that the origins of modern harmonic tonality can be seen most clearly in the repertoire of Italian instrumental dance genres from the sixteenth century, especially the frottola and villancico. In these secular genres, we find an emphasis on triadic vocabulary and cadential gestures (dominant-tonic progressions) that Lowinsky believed became the means by which European musicians inculcated a sense of functional tonality. (Ironically, Lowinsky seems to have inverted the thesis of Coussemaker and Machabey by crediting the Italians as the source of this harmonic sensibility, the northern composers evidently being too tethered to modal thinking.) But Lowinsky did not entirely preclude sprouts of tonal greenery in some earlier northern music. Both Dunstable and Dufay evinced a strong sense of harmonic tonality in passages of their music; a motet by Josquin ("Benedicite omnia opera Domini") also contained some remarkable signs of tonality, even including the use of a dominant seventh chord at a cadence (Lowinsky, 20–25).

But these were the exceptions. By and large, most of the Burgundian composers seemed too tightly bound to the modes. It was Italian musicians in the sixteenth century who most sensed and exploited the tonal forces in their secular music that would soon foliate so fully in the seventeenth century.<sup>78</sup> (At the same time, Lowinsky also argued that it was Italian musicians—though not the same ones who were the seers of modern tonality—who seemed to have moved in almost the opposite direction by exploring an extreme form of chromaticism and triadic displacements that virtually obliterated any notion of tonal centrality and whose musical language could thereby be labeled as “triadic atonality.” Not surprisingly, it was Gesualdo whom Lowinsky singled out for this honor.)

Finally, a few words should be said about Carl Dahlhaus’s dissertation. In many ways, his *Studies on the Origins of Harmonic Tonality* seemed a continuation of Ficker’s “linear” thesis of early tonality. Dahlhaus was always highly skeptical of Bessler’s claim that functional tonality could be inferred in the music of Dufay by way of the contratenor as *Harmonieträger*.<sup>79</sup> But his more important argument was that harmonic tonality was simply not something that could be identified and dated with any empirical certainty in older music. (One thinks of Fétis’s “fait isolé.”) Instead, Dahlhaus suggests that harmonic tonality is more like a composite gestalt whose individual “co-factors” are difficult to disentangle into discrete elements. This makes the reconstruction of its origins a precarious project.<sup>80</sup>

It would take us too far afield to pursue these arguments further here. But as a final thought, it might be worth asking whether it is any coincidence that worries about the origins of tonality arose among these twentieth-century scholars at the time that we find some of the most animated hand-wringing concerning the “death” of tonality? (This dual concern is explicit in the very title of Lowinsky’s monograph.) They are really two sides of the same coin. Dating the “birth” of tonality is simply the converse of the more frequently played game of dating the “death” of tonality. The two myths are deeply entwined, as Glen Watkins has shown.<sup>81</sup>

Isn’t it curious that so many twentieth-century composers of serialism—including Schoenberg, Webern, Kreneck, Dallapiccola, and somewhat belatedly, Stravinsky—all viewed the music of many Renaissance composers with such sympathy (though each in their own way, to be sure)?<sup>82</sup> Certainly one source of attraction was the extraordinarily intricate imitative counterpoint and mensuration techniques many of the Netherland composers cultivated, techniques that can be seen reflected in many canonical operations of serialism. But surely another aspect that drew the attention of the twentieth-

century gazers was a different kind of experimentation seen in the harmonic chromaticism of some sixteenth-century composers. After all, it was during the later sixteenth century that the compositional foundations of the *prima pratica* were undergoing some of their most stressful fracturing in the chromatic and enharmonic experimentations of the Italians (Gesualdo, Vicentino, Marenzio, and Luzzaschi), which is also to say immediately preceding the time Fétis believed *tonalité du plainchant* was about to be replaced by *tonalité moderne*. Consider that around the time Lowinsky was writing his monograph, Stravinsky was also studying scores of Gesualdo, eventually to set some of them himself. (Not coincidentally, Stravinsky wrote a flattering preface to Lowinsky's publication.) The "crisis" of the late sixteenth century that eventually gave birth to modern tonality obviously resonated tellingly with composers in the twentieth century who were likewise wrestling with the nature of their own harmonic language and the legacy of tonality.

Rudolf von Ficker seemed to recognize this dialectic already in 1929.

Now, it is no mere coincidence that an interest in and understanding for this recondite music should awaken precisely at a time when our latter-day musical production is striving after new and revolutionary forms of expression: when fundamental musical principles, that had held sway for centuries and were considered immutable, appear to be wholly subverted. This applies, in particular, to our views concerning tonal harmony, which is sometimes entirely done away with in modern compositions.<sup>83</sup>

And then there were those musicologists mentioned above for whom the question of tonality's origins suddenly seemed to emerge as such a pressing issue right after the Second World War. Glen Watkins has suggested at least one good reason of cultural zeitgeist why it was that in the 1950s this question seemed to take on such urgency. For it was in this postwar period in Germany that the full impact of the modernist debates over new music and serialism attained full force. (This was during the heyday of Darmstadt, we must remember.) While there was plenty of angst expressed earlier in the century over the path that modern music was taking, it was really in the 1950s that more and more "serious" composers seemed to be joining the serial bandwagon and tonality appeared truly to have been a historical cycle that was coming to an end.<sup>84</sup> It is no wonder that musicologists were becoming increasingly sensitive to the historical contingency of tonality. The story of tonality's birth seems to be one that needs to be retold by historians during periods of tonal anxiety and stress, whether it is the confrontation with dif-



fering tonal systems over history and between cultures during Fétis's day, or the (apparently) triumphant atonality and serialism of the postwar generation. Alex Rehding captures the elegiac nature of this task beautifully:

The threat that the discontinuation of the tradition of tonal music posed was the motivation for, rather than just a contemporaneous event in, the bustling search for origins. . . . The "melancholy" search for origins would appear to be predicated on this pessimistic attitude: images of death and decay were cultural tropes that connected naturally with the discourse of origins.<sup>85</sup>

The nativity story of tonality is really the twin epic tale to the passion play of tonality.

### FÉTIS ON THE ORIGINS OF HARMONY

But let us return to our story. We left Fétis earlier in this chapter licking his wounds after having lost the essay competition posed by the Dutch academy to Kiesewetter in 1828. His first major publication in musicology seemed to have been a failure, though for whatever consolation it was worth, he did receive the silver medal. Over the next few years, Fétis devoted most of his energy to the production of his *Revue musicale*, writing a prodigious number of articles for this weekly journal on a myriad of topics. But this was not all. In 1830 he wrote a popular introduction to music titled (in its English edition) *Music Explained to the World, or How to Understand Music and Enjoy Its Performance*.<sup>86</sup> (It would be reprinted countless times and translated into a half dozen European languages, becoming his most popular publication.) During this period, Fétis was also working on his most ambitious publication yet, a biographical dictionary of musicians that would update the one produced earlier in the century by his mentor, Alexandre Choron. This would be his *Biographie universelle*, whose first volume appeared in 1835. As his work on this project slowly progressed, he made the daring decision to add a major (217-page) introductory essay to it that was titled "Résumé philosophique de l'histoire de la musique." This would turn out to be Fétis's next attempt to write something substantial on the history of music after his ill-fated *Mémoire*. But in both its audacious scope and its many new arguments, the "Philosophical Summary" marked a major step forward in Fétis's career ambitions.<sup>87</sup>

He surely had good reasons for thinking he ought not wait any longer. We saw earlier that both Bains and Kiesewetter had come up with their own histories of music (in 1828 and 1834, respectively). There was also a history of

music that had come out in England by William Stafford in 1830. (Interestingly, it was translated into French in 1832 by Fétis's wife, Adèle; even more tellingly, it was peppered throughout with "corrections and additions" by Fétis as well as supercilious footnotes chastising his English counterpart for mistakes and omissions.)<sup>88</sup> All around him, it seems, he saw scholars publishing books on music history that seemed to be taking the wind out of his own sails. It was clearly time for him to step out and begin articulating some major philosophical theories of music history that he had been thinking about over the course of his recent research.<sup>89</sup>

We will see that Fétis had come a long way from his 1828 debut during those seven years. Not least, there was his newfound Hegelian historicism that would play as crucial a role in his history of music as it did in his theory of music.<sup>90</sup> While it might seem odd to place a "philosophical history" at the beginning of a major biographical dictionary of musicians, he was able to tell a rich story within which all of the characters whose biographies would be detailed in later volumes are seen to play a role. Indeed, Fétis insisted that the individual entries for the various composers, performers, and theorists in his *Biographie universelle* would have no "intelligible meaning for readers unless I would be able to make my views and principles known to them in regard to the art and science [of music]."<sup>91</sup> In a sense, the entire eight volumes of the *Biographie universelle* constituted a single history of music with the *Résumé philosophique* as its grand prologue.

We will have several occasions in the course of this book to look at some of Fétis's arguments found in his *Résumé*. For now, I want to concentrate on his thoughts concerning the origin of harmony. We will see that Fétis had been doing a good deal of thinking about this question since his 1828 monograph. By coupling his Hegelian metaphysics with some recent historical studies of European civilization, Fétis was able to construct a challenging new theory concerning the development of occidental music.

Fétis, we may now be surprised to learn, anticipated the arguments of Coussemaker (and, for that matter, Riemann) that the northern races of Europe had indeed shown an early instinct for harmony. Especially in the songs of the medieval English and Celtic bards accompanied by their various types of harps, Fétis found clear evidence of a harmonic sensibility. In the *Résumé*, he made a forceful case that harmony—harmony in the literal sense of simultaneously sounding tones—was entirely a product of the northern races ("Peuples septentrionaux"): the Vandals, Scythians, Goths, Saxons, and Celts. Drawing heavily from organological evidence, Fétis argued that the singers of many northern cultures accompanied themselves with musical instruments having multiple strings. Given the number and disposition of

Pl. 7  
**ANCIENNE MELODIE RUSSE.**

*Andante moderato*

Chant

Accompagnement de la Gously.

*Cet air, qui se chante particulièrement dans l'intérieur des terres de la petite Russie, est de la plus haute antiquité. Sa tonalité est un type qui se reproduit dans un très-grand nombre de mélodies des peuples du Nord.*

*Au dernier couplet, la voix reste sur la note A du premier Temps de l'avant dernière mesure.*

Example 3.8. Russian song with accompaniment by the gousli. Fétis, *Résumé*, plate 7. The commentary reads, “This song, which is sung particularly in the interior of Russia, is of the greatest antiquity. Its tonality is of a type that is replicated in a great number of melodies by people of the north.”

these strings, he deduced, it could be possible for a player to strum or pluck simple harmonies, usually perfect consonances of the fifth or octave, but in not a few cases actually chords.

We can see what some of this music may have sounded like in example 3.8, an ancient Russian melody that Fétis believed to have Scythian roots. (The Scythians, he noted, were early ancestors of the Slavs; *Résumé*, cxxvii.) Fétis’s transcription of the melody includes a harmonic accompaniment played on the gousli—a harp-like instrument of five strings tuned mainly in thirds.<sup>92</sup> The harmony here consists largely of alternating A minor and C major chords, with the melody slightly favoring the former chord with its diapente ambitus descending from E to A. (He believed the songs of most Slavs and many other northern peasants were in a minor mode no doubt due to their pitiful poverty and bondage in slavery and serfdom; *Résumé*, cxxvii.)

Fétis found other evidence testifying to the origins of harmonic music in the north of Europe from the British Isles, where English, Scottish, Welsh,

and Irish bards seemed to have employed harps of various sorts to accompany their songs with chordal sonorities (*Résumé*, cxxxiii–cxlvii). It thus made perfect sense that many of these same races cultivated part singing that was reported by many observers through the Middle Ages and thus resulting in works such as the Summer Canon. Nor was harmony the only contribution of the northern tribes. Fétis credits the Celts with developing a primitive ideographic notation with which to record their music, while the Lombard and Saxon tribes pioneered the use of neumatic notations that he believed they inherited from oriental sources and subsequently passed on to their southern neighbors (clxi). Fétis believed that despite contrary arguments, neumatic notation succeeded the alphabetic notation common in the south of Europe and was thus a later and more reliable source for the recording of chant.<sup>93</sup>

The conclusion seemed as irrefutable as it was ironic: the races of northern Europe, with all their primitive and aggressive traits, seem to have been the originators of musical harmony as we know and practice it today:

The nations of the Scythians and Slavs, the Vandals, Goths, and Lombards, who during more than three centuries invaded the Roman Empire and everywhere sowed destruction, seemed to have dealt a mortal blow to the Greek music cultivated in that empire. But these very people possessed a music whose constitution was completely different from those of the people it conquered. In this music one finds several rudiments of harmony and a system of notation that by a slow process mixed with the remnants of the ancient Greek music and ultimately produced the elements of art that we cultivate today. (*Résumé*, cxxvi)

The destruction to which Fétis refers was the havoc wrought by these northern tribes as they invaded southern Europe beginning in the fourth century in wave after wave. The Vandals, the Goths, the Lombards, and other Germanic tribes each took turns, it seemed, in bringing destruction and ruin to the more advanced civilizations of the south. Along with this ruin and destruction, though, the northern people also contributed something positive: musical harmony. As many of the invaders finally settled down in parts of the Mediterranean rim, Fétis speculated, they intermixed with the indigenous peoples, introducing them for the first time to the multipart music that had long been part of their singing traditions (cxxvi–cxlvii).<sup>94</sup>

Not that this was entirely a new story. Rousseau had in the previous century also famously identified the north as the birthplace of musical harmony. Of course in the story told by our Genevan anthropologist, the moment that

the cold, calculated harmony of northern tribes infected the warm, passionate melodies of the south was precisely the moment that music lost its capacity for expressing human emotion. Virtually turning Rousseau's argument on its head, Fétis saw in the blending of northern harmony with the monophony of the southern nations the decisive crucible within which Western art music could finally emerge. Fétis realized how implausible his thesis must have sounded.

What's that, you will say! You have denied the knowledge of harmony to those people who were the most learned and most cultivated in the arts among all of antiquity, and you claim that this unique knowledge was really the possession of savage nations, separated from the civilized world by virtue of their forests and the rigors of their climate as much as by the ferocity of their instincts and the barbarism of their customs. Are not such ideas completely contrary to all that we know about the propagation of human knowledge? (*Résumé*, cxxxii)

Fétis then patiently explained how this was indeed not the case. It was never a question of the sophistication of a civilization, rather the variability of sensibilities determined in part by (and in part determining) their various tonalities. The necessity of harmonizing certain sounds arose among northern people on account of their instinct, the nature of their scales, the forms of their melodies, and the construction of their musical instruments. In just this way, the scales and melodies of ancient Greece did not engender harmony because the beauty of their music depended on a "differing order of things." Harmony, in short, must be seen as the patrimony of the northern peoples (cxxxiii).

To be sure, the mere presence of harmony, let alone the singing or playing of notes simultaneously, was not necessarily a sign of more refined tonal sensibility. After all, the very first attempts at introducing harmony into the sacred chant of the church by composers in the early Middle Ages resulted in music that Fétis believed to be some of the most rebarbative in the entire history of music. He thought organum to be a depraved practice revealing the complete insensibility of most medieval musicians. The singing of discant that began to be taught and practiced after that showed little improvement in taste. This is not even to mention the indecent practice of many thirteenth-century composers who combined sacred melodies and texts with those of the most lascivious secular tunes in their motets, resulting in a genre that could only be called "bizarre, or even a monstrosity" (cxciij).

Not that there were no signs of grace in the polyphonic music of this

time. Once again, Adam de la Halle came to the rescue. The three-part rondel of Adam that Fétis had transcribed in the very first issue of his *Revue musicale* mentioned earlier, “Tant con je vivrai n’amerai,” showed a glimmer of tonal sensibility, no doubt due to the bard’s cultivation of monophonic song. He noted in particular the metric animation that seemed to stand in stark contrast to the sacred chant practice, with its uniform, unchanging rhythm of equal note values.<sup>95</sup> As early as the first half of the ninth century, Fétis found evidence of some popular songs being written in rhythmic modes. The troubadour songs Fétis transcribed were all in one of the various rhythmic modes that had already been codified by Franco of Cologne in the eleventh century, or so he thought.<sup>96</sup> Clearly, this rhythm gave the songs a more dynamic, passionate quality suited to the emotions and needs of the common people in their daily lives and to express their many pleasures and pains in a manner “more animated than that of prayer” (clxxiii).

For all the advances vernacular song seemed to have been making in both harmony and rhythm, though, its influence on the music sung in church was slow to be felt. It was only in the twelfth century, he believed, that church musicians first began to apply the rhythmic modes in their own singing. Only then was it possible for church musicians to begin their experiments with harmony. The two went hand in hand, it seems. The conclusion was unavoidable.

In summarizing all that I have just said, it seems that by 850, and probably even earlier, there existed music that was measured and rhythmicized for the use of the common folk even though sacred chant lacked any such rhythm and meter. These two genres of music remained distinct from one another until the twelfth century. By virtue of its difference, vernacular music appeared to demonstrate more progress in the art of writing harmony in multiple voices than seen in music for the church, which remained as a simple unison with equal note values and in intervals without liaison. Consequently, one is not required to deny the existence of one simply on account of the retarded development of the other. (clxxviii)

But while crediting secular music with the introduction of harmony and animated rhythms, Fétis was not willing to grant, as would Coussemaker, that this music was tonal in any modern sense. It may have been a step toward that goal, but it was not yet there. As evidence, he offered some Celtic tunes from the British Isles.

In studying an anthology of Welsh tunes that had been published by the British historian Edward Jones in 1794, Fétis came upon an old harp tune.<sup>97</sup>

Pl. 8.  
Ancien air Welch ou Gallois

10. *Moderé*

Harpe.

Example 3.9. "Welsh air," from *Résumé*, plate 8, no. 10.

The tune, given in example 3.9 ("The Delight of the Men of Dovey"), certainly seems to have many traits we associate with modern tonality (*Résumé*, cxxxiv).

But what actually distinguishes the tonality of Welsh songs from any later tonality can be seen in their final phrases, "which often end on a different tone from the one in which these melodies seemed to have begun." In this case, the apparent F major tonality of the opening is contradicted by the close in D minor. (Another Welsh tune included by Fétis that was a "favorite" of Henry V similarly begins and ends on differing tonal centers—plate 8, no. 11, not included here.) One might dispute Fétis's bimodal analysis, as one could easily argue that the whole tune is securely in D minor, with various swerves to its mediant, much as we saw in the Russian song recorded in example 3.8. But a more trenchant critique would be Fétis's use of selective evidence. It turns out that the majority of Welsh tunes recorded by Jones in the collection from which Fétis drew begin and end in the same key and are—at least in his arrangements for keyboard—all in a modern, mostly major-key tonality.

This could be said of another Welsh tune that Fétis does cite: a song "of King David" that he dates to the eleventh century (ex. 3.10). Without attempting to explain the inconsistency, Fétis concedes that "this piece is exactly in the tonality of our mode of C major" (cxxxiv).

Perhaps Fétis tempered any rush to pronounce Welsh bards the originators of modern tonality by the evidence of their favorite bowed instrument, the *crwth* (*crouth* in French). Possessing a written record that predates the Christian era, the *crwth* is held by Fétis to be one of the most remarkable and important instruments in the annals of music. While he concedes it is capable of producing simple triads in its expanse of six strings, the disposi-



Example 3.10. "Song of King David," from *Résumé*, plate 8, no. 11.

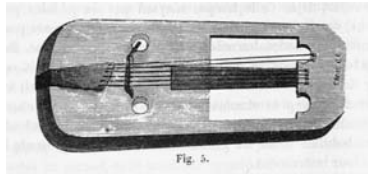


Figure 3.2. *Crowth* illustrated in *HGM*, 4:378.

tion of the strings and their tuning suggest that the kind of harmony bowed on the crwth would most likely result in perfect consonances (octaves, fifths and fourths) that would make the "harmony sound roughly that of the Latin church in the Middle Ages"<sup>98</sup> (see figure 3.2).

When Fétis turns to music from Ireland and Scotland, we seem to move into new tonal territory. One Gaelic song in A major ("Ailleacan Dubh O!") is drawn from an eighteenth-century study of Irish music by Joseph Walker.<sup>99</sup> It displays a unique tonality in its apparent suppression of the leading tone as shown in example 3.11. The result is a "gapped" or "incomplete" scale that Fétis believes to be a distinctive marker of Celtic music. (Although Fétis gets there by ignoring a G#4 indicated in Walker's transcription where it occurs twice as a passing grace note in bars 3 and 15; he also does not seem to consider the G♭ in the second half of the song to undermine his conclusion that the song is based on a "gapped" scale.) Despite its unusual tonality, Fétis believes it to be particularly susceptible to accompaniment on the larger Irish harps (*Résumé*, cxli).

An Irish dance called "Corneul Irbhin" (ex. 3.12) displays a completely different kind of tonality for which Fétis suggests a most unexpected genealogy.<sup>100</sup> Based on its rapid figurations as well as its Mixolydian-like scale structure (at least in those sections where the B♭ is retained), the tune seems to convey a distinct oriental quality. In fact, Fétis expresses his suspicion that its origin must be from South Asia and more specifically from India, where we can find similar modes (*Résumé*, cxlii). Based on this slimmest of evi-



Pl. 9.

**AIR IRLANDAIS.**  
*Ailleacan Dull C!*

13. *Affettuoso*

The image shows a musical score for an Irish air. It consists of five staves of music in treble clef, with a key signature of one sharp (F#) and a common time signature (C). The tempo/mood is marked 'Affettuoso'. The title is 'AIR IRLANDAIS. Ailleacan Dull C!' and the number '13.' is written to the left of the first staff. The music features a mix of eighth and sixteenth notes, with some triplet-like patterns.

Example 3.11. Irish air from *Résumé*, plate 9, no. 13.

**CORNEUL IRIBHIN.**

14. *Allegro.*

The image shows a musical score for an Irish dance tune. It consists of four staves of music in treble clef, with a key signature of one sharp (F#) and a common time signature (C). The tempo is marked 'Allegro.'. The title is 'CORNEUL IRIBHIN.' and the number '14.' is written to the left of the first staff. The music is characterized by a fast, rhythmic pattern of eighth and sixteenth notes.

Example 3.12. Irish dance tune from the *Résumé*, plate 9, no. 14.

dence, he bravely concludes that Irish music must originally have its roots in India. Now Charles Burney, Fétis conceded, had earlier noted similarities between the music of China and the Scottish highlands, each being based on similar scales, including a gapped scale in which the leading tone was repressed and the fourth degree was raised (lvi). But Burney had believed the connection was explained through their common roots in ancient Greek music. Fétis's suggestion that the origin of this Celtic scale may actually be in the distant Orient was something else altogether.

Realizing that this thesis connecting Celtic music with the Orient might sound incredible to his French readers, he offers both apology and promise:

I know that such an origin is contrary to all received ideas. But if the narrow limits within which I am obliged to remain [in this essay] do not permit me to develop my historical theory enough to make it impervious to attack, I believe I have said enough to arouse the interest of all educated men. The publication of my General History of Music will succeed, I hope, in conquering the doubts of my readers. (cxlvii)

We will return to Fétis's audacious "théorie historique" about the oriental roots of Celtic music in chapter 5 for a closer look. There we will see that he was building on an observation first made by William Jones that the origins of many Celtic languages (among others in the West) could be traced to North India, and Fétis was simply attempting to develop an analogous "Indo-European" lineage for Celtic music.

For now, though, let us return to the question with which we began: was there any evidence of modern tonality in the music of the Middle Ages? Fétis remained firm in his conviction that the answer was no. Of course. He conceded that there were songs such as those we saw from the British Isles in which features of modern tonality seem conspicuous, perhaps even indisputable. And yes, he admitted, there were chordal accompaniments played on harps and other instruments by northern bards that were full of triadic sonorities. But none of this, he continued, is equivalent to the modern tonality first bequeathed by Monteverdi. Nor did the adoption of harmony by composers in the Middle Ages change anything. We have seen that the first attempts at part singing in the practice of organum after the tenth century led to music that Fétis thought to be some of the most disagreeable in the annals of music (clxxxiii). Matters only got worse in the twelfth and thirteenth centuries with the practice of discant and its charivari of disassociated voices and errant dissonances.<sup>101</sup>

Only in the fourteenth century do we first find composers from Italy who were able to overcome the barbarous practice of discant and begin to compose in a deliberate, tasteful way, learning to shape phrases, coordinate harmonies, and control dissonance (cxcvi). In his *Histoire générale de la musique*, Fétis cites a ballata by Landini that he believed to be from the first decades of the fourteenth century ("Non avra [ma] pieta") and hailed it as another landmark in music history. With its careful employment of dissonance, melodious character, and rhythmic vitality, Landini's song marked a profound transformation that would eventually "lead to the great art of modern music." Above all, it is its tonal sensibility that stands out: "The successions of consonances are presented in a natural manner and are resolved in a

natural manner. The tonality is no long vague and uncertain; instead there is a sense of key [*sentiment du ton*] from the beginning to the end. . . . To summarize our findings in a few words, it is the beginning of true art succeeding false art" (*HGM*, 5:315).

An Italian *lauda* ("Alla Trinità Beata") that Fétis found in a manuscript and that he also dated to the fourteenth century was another remarkable testament to this newfound harmonic sensibility, filled as it was with rich four-part triadic writing and symmetrical phrasing. As Fétis described it, the music possessed a "suavity of melody, purity of harmony, and regularity of rhythm unknown to all people but the Italians."<sup>102</sup> The piece became a staple in his historical concerts and even earned the praise of Berlioz. But as many savvy critics soon began to point out, the music sounded suspiciously modern to be from the early fourteenth century. As it turns out, Fétis had probably gotten the melody not from any ancient manuscript but from a transcription by Burney, and he then harmonized it himself (in addition to altering some notes of the melody).<sup>103</sup> In response to his critics, Fétis dissimulated his source for the music while continually defending its authenticity (*HGM*, 5:282). It is beyond doubt that Fétis took a great deal of liberty in making his performance edition, as no other *lauda* from the time remotely resembles this harmonization. But he remained adamant that any editing he did was justified by his deep historical understanding.<sup>104</sup>

With the way shown by Italian composers of the fourteenth century, northern composers had models they could now study and imitate. A slew of fifteenth-century Burgundian masters (many of whom Fétis now confidently calls "Belgians") were soon helping to lead "the progress of harmony" to new heights. Dufay stands out, possessing "a certain superiority of harmonic sweetness and elegance of movement" (*Résumé*, cc). But other composers—such as Binchois, Busnois, Faugues, Eloy, and Brassart—also took part.

For a planned edition of masterworks by ancient Belgian contrapuntists (an edition that unfortunately never came to fruition), Fétis transcribed a number of liturgical works that he believed to be by Dufay and Busnois, two of the preeminent "Maîtres Belges."<sup>105</sup> In a few passages, Fétis found remarkable part writing that merited special annotation in his manuscript copies. For example, the second measure of a page from a *Christe eleison* that he thought to be from a mass by Dufay (reproduced in ex. 3.13) shows "a most remarkable example of the use of an ornamental note that musicians of a later time would call a changing note [*note changé*]. It creates here the harmony of the seventh that is called in modern music the dominant seventh." Little did Fétis know that the mass was not by Dufay, rather the composer Walter

Example 3.13. Excerpt from the *Christie eleison* of Walter Frye's *Missa te gratias*. Manuscript II 3851, Fétis 1805, fol. 131. Courtesy of the Bibliothèque royale de Belgique.

Frye, a rough contemporary of Dufay. Given Frye's English heritage, though, this might not have altered Fétis's claims about the music's harmonic innovations even if it shaded some of the glory he was hoping to throw upon his Belgian predecessors.<sup>106</sup>

An excerpt from another piece (this time it really is by Dufay) is shown in example 3.14. It is from the Credo of his mass "Ecce ancilla Domini" and displays (1) a "very rare" example of fifteenth-century music in which the interval of a minor fifth is used (measure 4 of the example) and (2) "a fourth used without preparation as an appoggiatura" (measure 8 of the example).

Further gems were found in these manuscripts that merited Fétis's intervention. In a transcription of Busnois's three-part chanson "Avegne que venir pourra," Fétis noted one suspension figure that represents the "oldest known example" of a full modulation using a prepared dominant seventh chord, while a passage in a *Magnificat sexti toni* (anonymous, though Fétis believed it to be by Busnois) reveals a "very interesting example, which I believe to be unique to the time of Busnois, in which a chord of the fifth and sixth is used . . . on the seventh degree."<sup>107</sup> Not that Fétis approved of everything he saw. In the same *Magnificat*, Fétis noted that in one passage, the superius and contratenor sound a dissonant seventh that is incorrectly re-

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(1) Voici un des très rares exemples, au 15<sup>e</sup> siècle, de l'emploi de l'interval de quinte mineure, en, comme on disait alors, de *mi contre fa*.

(2) *quarte employé sans préparation, comme appoggiatur.*

Example 3.14. Excerpt from the *Credo* of Dufay's *Missa Ecce ancilla Domini*. Manuscrit II 3852, Fétis 1806, fol. 31. Courtesy of the Bibliothèque royale de Belgique.

solved by the lower voice (fols. 97–98). But more times than not, Fétis was impressed by the musical instinct shown by “Busnois,” “whose harmony . . . has all the power of that of Dufay, but his style is younger, more animated, and his rhythm more accentuated” (*HGM*, 5:331).

From this point forward, European composers continued to refine their art and tonal sensibility, leading to the incomparable accomplishments of Josquin at the beginning of the sixteenth century (one who “perfected everything”; *Résumé*, ccv), and Palestrina at the end of the century (a composer whose sublime vocal polyphony earned him “immortal glory”; ccix). It is true, as we earlier saw, that some composers of the time succumbed to contrapuntal artifice, chromatic excess, or mannerist experiments with enharmonicism. But all in all, the sixteenth century shows a full ripening of “plainchant” tonality.

It is important for us to keep in mind that the perfection of tonality by these Renaissance composers, in Fétis’s ears, had nothing to do with *tonalité moderne*. This was true even of those remarkable premonitions of modern tonality noted in examples 3.13 and 3.14. We have already learned in chapter 1 why Fétis would not have been convinced by any evidence of modern

tonality in early music he might have been shown, no matter how chordal the texture, how animated the rhythm, how sensitive the dissonance treatment. For Fétis believed it impossible to intuit modern tonality in any real sense before Monteverdi's epochal innovation. As he had already argued with Gevaert and Lambillotte, the empirical presence of some single sign of modern tonality (an "isolated fact") hardly constitutes evidence of its activation. Listeners of the Middle Ages simply were not yet ready to hear those attractive tonal forces that would be so essential to the dynamic of modern tonality. While the advances in rhythm and harmony in the Middle Ages may have helped lay down some key flagstones on the path to *tonalité moderne*, that goal still lay far in the future.

In other writings, Fétis seemed to waver slightly regarding this point and concede that a few theorists before Monteverdi might have had inklings of modern tonal forces. Marchetto of Padua, the remarkable fourteenth-century music theorist, was one such seer. By dividing the whole tone into five parts (or more technically, five *dieses*), Marchetto seemed to recognize the attractive tendency of the leading tone. But his ideas, simply put, were too far ahead of his time; they "remained without significance in his time and only had application nearly 300 years later, because they did not meet any need in the tonality of plainsong."<sup>108</sup> The same seems to be true about the Venetian theorist Zarlino, whose description of double counterpoint two centuries later was a "stroke of enlightenment," anticipating as it does recognition of the inversional identity of intervals (*Esquisse*, 28).

This points, then, to the other side of Fétis's argument. If it was difficult for musicians before Monteverdi to intuit and impose tonal tendencies on music, would not the opposite be true for musicians after Monteverdi? How will we ever be able to hear medieval or Renaissance music without familiar expectations of tonal attraction? This is surely why so many of his contemporaries, he must have thought, were so misled into thinking that certain moments of medieval music were tonal in the modern sense. They were simply incapable of hearing the music with the ears (and mind) of a medieval musician. "Who is the musician of our days," he asked rhetorically, "who can listen to such music as those found in the examples given by Hucbald, Guido, and other authors of the Middle Age?" (Fétis is speaking here about the practice of organum, for which he has already repeatedly expressed his profound distaste.)

Perhaps the singers of the time took great pleasure in it, finding it so beautiful that they reserved it for Sunday services and special feasts. After all

that I have said regarding the musical inclinations of different peoples, it seems to me to be amply demonstrated that the education of the ear can lead to tastes quite differing from one another. (*Résumé*, clix)

The problem, as Fétis diagnosed it, almost seemed pathological. Once Monteverdi unleashed the contagion of modern tonality with the publication of his fifth book of madrigals in 1605, Pandora's box was opened. Modern tonality would slowly infect the ears of musicians throughout Europe as the music migrated northward from its origins in northern Italy. Such a pathological metaphor may not be too far misplaced. For the appellative quality of the dominant seventh was indeed something that Fétis believed once lodged in the ear of a listener becomes almost impossible to eradicate. Spread throughout Europe by carrier hosts of the basso continuo and genres of musical drama, modern tonality had a powerful media by which it was able to infect millions of listeners in a short amount of time. Once ears became exposed to its force, Fétis noted almost with a tinge of remorse, the fate of ancient tonality was sealed (ccxxii).

In an article that he wrote in 1853, Fétis expressed this point more strongly. Musicians of his own day, he wrote, have grown up with music of remarkable dramatic expression and passionate accents thanks to the modern tonality in which it is written. (Fétis singled out the music of Rossini for being perhaps the most influential force in his own time.) But this same music precludes our being able to hear the "calm and majestic" character of earlier music whose "grandeur and permanence in harmony conveys the idea of the creator."<sup>109</sup> There is no population prepared to hear this ancient tonality

. . . as people did at an earlier time; there is no intelligent historian who can simply cast off his habits and prejudices; and there is finally no artist who is enlightened enough to rise above formulas of his time and to comprehend an art in all its determinations. (283)

There is thus an apparent paradox, and perhaps something sadly melancholic, in Fétis's own antiquarian project in early music, since the music he transcribed, edited, and performed in his *concerts historiques*—or at least those pieces from before 1605—was evidently never destined to be restored but only displayed, much as antiquities or fossils are exhibited in a museum. One can appropriate them, admire them, and perhaps even get some pleasure in them; but we will always be hearing them, so to speak, through a glass darkly. Great artworks they may be, but they will never be part of *our* music, their tonality a piece of *our* own language. Modern tonality had so insinuated

itself in the ears and minds of musicians that no amount of historical inoculation was possible for the return to the norms of ancient tonality. Joseph d'Ortigue, whom we met in the previous chapter as a champion of the chant restoration project, expressed the thought most poignantly: "The vase is broken, and the perfumes that were in it have now evaporated."<sup>110</sup> Rather than a pathological metaphor, d'Ortigue offered a militaristic analogy in which the older tonality was besieged and ultimately overcome by the stronger forces of modern tonality that had forced open the ramparts of the cathedral (col. 1476). Several years later, the music theorist Anatole Loquin came to a similarly bleak conclusion. Modern tonality, he wrote, had so ingrained itself into our hearing that any attempt to resurrect plainchant tonality would be useless and merely a dry scholarly exercise in musical archeology.<sup>111</sup>

It is a depressing thought. Yet the argument may help us understand why Fétis countenanced the use of tonal harmonies in his prescriptions for the accompaniment of plainchant on the organ, as we saw in the previous chapter. There was really no other choice if we are to make chant both intelligible and beautiful for the masses. But what of the original plainchant tonality? Had it really no future? D'Ortigue seemed the most despondent of all about the prospects. Modern tonality, we recall him crying out, had slayed plainchant tonality once and for all. "We know very well that all our efforts cannot restore life to plainchant tonality." All that there is left to do, he added sadly, is for us to offer plainchant tonality "its funeral oration."<sup>112</sup>

### CAN THE TONALITY OF PLAINCHANT BE SAVED?

But perhaps all was not quite so hopeless. Elsewhere in his *Dictionnaire*, d'Ortigue seemed cautiously more optimistic. Perhaps there might yet be a way of saving the tonality of plainchant from oblivion. Perhaps the program of chant restoration was not a pipe dream. But he realized that for any real restoration to be successful, it could not simply be imposed by congress resolutions of musicologists or mandates from an archbishop. Rather, for the practice of chant singing in its authentic tonality to become truly rooted, it had to originate and be nurtured from below, just as one learns one's mother tongue. And here d'Ortigue actually agreed with Fétis: medieval music did follow a unique tonality that was incompatible with modern tonality. But he didn't thereby conclude with Fétis that it was irretrievably lost nor that it was impossible for musicians to change modes of hearing—in the most literal sense! One could be musically bilingual provided the proper grammars, vocabularies, and pronunciations were understood. This is, incidentally, why I think d'Ortigue could remain such a passionate partisan of Berlioz and



Liszt—composers of the *omnitonique* order par excellence—yet at the same time remain committed to his project of chant restoration. Each repertoire was of such a completely opposing tonal, aesthetic, and social world that paradoxically there need be no inherent conflict between them, provided, however, that they remain separate. It was only when composers attempted to overlap the two worlds that their incompatibilities were apparent for all to hear. It wasn't aesthetic prissiness on d'Ortigue's part; rather, it was a question of linguistic comprehensibility.<sup>113</sup>

D'Ortigue voiced guarded hope that ancient tonality—the *tonalité du plainchant*—might not quite yet be extinct. Embers of this ancient tonality might still be found that somehow survived the deluge of modern tonality. Indeed, d'Ortigue was quite certain he knew where to find this subaltern practice. And where might this isolated enclave be? In some obscure monastery in Brittany? In an isolated village in the Scottish highlands? No, it was none of these places.

In an impassioned peroration that culminates his lengthy article on “Tonality” in the *Dictionnaire*, d'Ortigue lays out his hope:

Is the tonality of plainchant thus forever lost? God forbid that we would imagine such a terrible fate! . . . But let us not overlook one group that is unfortunately not paid sufficient heed regarding the genre with which we are concerned. This someone is the people, the people all around us whose ears are much closer to ecclesiastical tonality than ours, since they are less familiar with our luxuries, our arts, our pleasures, our refinements. [It is] the people of Paris and the people of our provinces in whom are conserved our ancient dialects. But we wish to speak first of the people of Paris, who are not always as revolutionary as one says they are, and who sometimes behave more conservatively than they think.

And where can we hear the people of Paris singing this older tonality? Why, all we need do is walk outside of our apartments in Paris in order to hear strains of the ancient tonality in our very own streets sung by the common folk, if we only stop and listen. It has been in front of our eyes—and ears!—all along in the calls of the street vendors hawking their wares—the vaunted “*cris de Paris*”:

These people of Paris preserve the ancient tonality much more faithfully than do the clergy and singers. The street is a better guardian than is the church. As a witness I cite the “cries of Paris,” those phrases more or less

melodic but always evocative, which the street vendors use in our markets in order to announce the wares they sell. These cries follow the order of the seasons, and each season is tied to the various products of the earth: these cries invariably passed on from father to son in the same mode, with the same intonation, the same accent, and even the same tonal cadence are evidently derived from the plainchant modes. Note how it is the mode, the melodic gesture, the note drawn out or cut short with a rough accent, and not the words that penetrate to the core of one's imagination and that will strike the heart. Their ears are so attuned to this scale, to this tonality, that they can discern right away who is the vendor, what the foods are that await consumption at home. Each fruit, each vegetable, each ware has its own picturesque note, its own cry, whether guttural or melodic, strident or smooth, by which it is called, just as for the bird catcher, each bird can be distinguished by its cry, independent of its song, and by which its species is called. Thanks to this musical argot, the people go about their business every morning, they [carry on] their commerce, their industry, and the tools of their trade during the day.

Here, thought d'Ortigue, was the salvation for the sacred repertoire of chant. The authentic accents of the older tonality reside in the street cries of the hawkers and pushcart peddlers. The modal language of the Middle Ages is none other than the common musical argot of the people.

And one can say that wherever one finds traces [of plainchant tonality], it is thanks not to the clergy or singers of the church but to the popular ear, which, despite the clergy and singers, has not become entirely alienated from the ancient tonality of the ecclesiastical modes. For music is created much like language; it is always the people who preserve it, since they are closest to the source, because they are indeed the very source. And it is also why, in music as with language, it is the people who invent it.<sup>114</sup>

For d'Ortigue, the musical tonality of the people was just like the dialects one found in the many regions of France, such as in Provence, Langduc, and Gascony. In each of these regions, the common folk speak with their own special patois, those unique accents and inflections uncontaminated and uncontrolled by the Académie's French. Similarly, in the folk songs, street cries, and lullabies of the simple folk we will find accents and musical inflections that are innocent of modern tonality. While these songs might not be precisely those of the plainchant modes, d'Ortigue does note that many of them

share characteristics in common, above all a penchant to avoid a raised leading tone. This is the tonality of the people and of plainchant, with which it has a "secret affinity."<sup>115</sup>

Now there is an amusing irony here, as we will recall that Coussemaker (and earlier, Kiesewetter) had made precisely the opposite argument. Far from finding shards of ancient tonality in the music of the common folk, Coussemaker found clear portents of modern tonality. For Coussemaker, the *peuple* were the avatars of modern tonality; for d'Ortigue, however, they were the conservators of ancient tonality. As today, the folk were a prized political constituency claimed by both sides of the aisle. Obviously it couldn't be both ways. Or could it? To resolve this conundrum, it would be necessary to study more deeply the tonality of the folk. The stakes were growing ever larger in the battle over tonality.

## Song

We ended the last chapter with a stirring appeal by Joseph d'Ortigue to go into the streets and listen to the "cris de Paris," those evocative calls of the pushcart salesmen and street peddlers hawking their wares. D'Ortigue thought that in these street cries, one could still hear strains of ancient tonalities that have miraculously survived among the simple folk for hundreds of years. Here is the true vox populi, the voice of the people, d'Ortigue assures us. But could the rough, uncultivated accents, intonations, and inflections of these jumbled shouts and calls really be vestiges of earlier music that have survived over such a long period of time? And more to the point, could such sounds really lead the way to the restoration of plainchant tonality in the church as d'Ortigue suggested they might?

*LES CRIS DE PARIS*

It is not that they hadn't been noticed before. A call of a Parisian strawberry vender ("Frese nouvele") was already quoted in a late thirteenth-century motet. By the sixteenth century, Parisian street cries were famous enough that they furnished sufficient material for Clément Janequin to compose a multi-voiced chanson, "Voulez ouyr les cris de Paris?" (Orlando Gibbons did the same service for the street cries of London.) But it was not until the nineteenth century that we find any systematic effort to collect and analyze the street cries of Paris. Without doubt the most ambitious of these studies is found in a sumptuous volume from 1857 written by an Alsatian composer, Georges Kastner (1810–67).<sup>1</sup> In it, Kastner offered a comprehensive history and anthology of hundreds of Parisian street cries, many of them originating as far back as the Middle Ages.

It is tempting to think that Kastner was inspired in his endeavor by

d'Ortigue's challenge at the end of his tonality article, given that it appeared just four years earlier. But there is no evidence of this. In any case, Kastner was an idiosyncratic writer and musician who had long been attracted to off-beat topics. He had already published major studies of military music, the Aeolian harp, music of the sirens, and songs of death (among other subjects). Each of his "livres-partitions" began with an extensive historical essay followed by an original orchestral composition (of often extravagant proportions and resources) that reflected the theme of his historical subject. Kastner, it must be conceded, was not very successful as a composer, his Wagneresque ambitions far exceeding his own creative capacities. (He was lucky enough to have time to devote to his research and compositional adventures—not to mention the money to support his luxurious publications—by marrying into one of Paris's most wealthy families.) But he was an avid reader, and his essays display admirable scholarly zeal. In his *Les voix de Paris*, he offered something else of real value as well: his study constitutes one of the first ethnographic efforts to record and analyze the street cries of Paris.

Kastner realized that for all the discussions he had read about these cries, no one had gone out and systematically recorded just what these cries sounded like. He thus took it on himself to do so. With pen and notebook in hand, Kastner started walking the streets of Paris, jotting down the many differing cries of vendors he heard. By the time he was finished, he had over four hundred different examples to analyze.

The quantity and diversity of calls our amateur ethnomusicologist discovered should not have been a surprise. By one estimate, there were over fifteen thousand street peddlers active on the streets of Paris on any given day.<sup>2</sup> There were the sellers of food products, each with their own distinct cries: vendors of fruits and vegetables, milk and cheese, breads and grains, nuts, spices, wine and oil, fish, poultry and meats. Then there were the peddlers of housewares and hardware: clothes, shoes, hats, rags, soaps, candles, brushes, pots and pans, pins, paper, and tobacco. They, too, all had their particular calls. And of course there were the newspaper hawkers and peddlers of books and magazines. Even itinerant laborers and entertainers advertised their skills with calls: shoe makers, tanners, carpenters, chimney sweeps, or purveyors of magic-lantern shows.

Together, these calls made a cacophonous racket. From dawn until dusk, the din of these cries resonated through the streets of Paris providing a soundtrack to the urban scenes of daily life. The voices heard were of men and women, boys and girls, and were of every range, dialect, and timbre. Some had cultivated voices; others sounded closer to the grunts and hollers

of farm animals. Yet Kastner was enchanted. Here was a veritable “sonorous ocean” (Kastner, vi), an urban symphony performed daily in front of our very windows. (It is no wonder he found inspiration in them to compose his own three-movement “Grande Symphonie humoristique vocale et instrumentale” based on some of these calls.) But one needed to pay careful attention to appreciate their many forms and varieties.

The voices of Paris that are accompanied from morning to evening by the rumbling of carriages like a basso continuo are innumerable and challenge the patience of the observer. Infinitely varied, reproduced by a thousand echoes, they form a kind of perpetual polymorphic canon the last note of which even the most skilled musician loses hope of finding. (77)

To be sure, the calls were often closer to a *parlando*, halfway between song and prose. The tunes, if one could call them that, were little more than snippets of melody, odd shaped, roughly intoned, and rarely sung the same way a second time. The vendors sang their calls in a maelstrom of dialects and patois, their prose often punctuated with shouts and exclamations. There certainly seemed to be no obvious consistency, let alone any obvious tonality, to bind all this noise together. Yet one should not thereby shut one’s ears to the beauty and allure of these calls, Kastner cautions us. There was a sophistication of sorts to this music, an authenticity and innocent purity, even a modicum of musicality:

In general, the cries of the merchants and nomadic craftsmen who roam the streets of Paris are well phrased, with good rhythms and acceptable prosody. They constitute, for the most part, melodic groups that have their own color and distinctive style. . . . The song of the criers is open-hearted, natural, often energetic, sometimes even tender and graceful. (82)

For all the tonal diversity one might hear in these calls, there were some common features that might be noted. One was the use of certain musical intervals as framing cells around which given calls might be organized. One of the most common such intervallic cells was the minor third as reflected in examples Kastner recorded by hawkers of string beans and potatoes (ex. 4.1). In other cases, though, chromatic semitones were sung, as in the calls from a vendor of green peas (ex. 4.2).

One can easily imagine that Kastner’s notation obscures the portamento in the voice that may well have oscillated between microtones rather than

MARCHANDE de haricots.  
Vivace.  
N° 74. Ha-ricots tendr', ha-ricots.

MARCHAND de pommes de terre.  
Allegro.  
N° 85. Heu! les pomm'de terr', les pomm'de terr'!

Example 4.1. Kastner, *Les voix des Paris*. Street calls of a seller of green beans (plate 13, ser. E) and of a potato seller (plate 14, ser. E).

Id:  
Allegretto.  
N° 51. Pois verts, pois verts; ha! les pois verts.

Allegro.  
N° 53. Pois verts, pois verts, pois verts, pois verts, pois verts, pois verts.

Example 4.2. Kastner, *Les voix des Paris*. Two calls of a pea seller (plate 12, ser. E).

semitones. In any event, as these examples suggest, vendors would often vary their cries, perhaps keeping the same set of notes or intervals but playing with their order, intonation, or rhythm.

One of the characteristics Kastner repeatedly observed was that many cries were based on a melodic schema that would then be varied by sellers. They “depend on one or more primitive formulas, which, passed through many differing mouths, are altered, modified, and thereby gave birth to countless variants” (82). They were close enough to offer a family resemblance with one another, thus—as d’Ortigue promised—being recognizable by consumers as signifying the goods being sold. Yet they allowed a flexibility of interpretation that gave each seller his or her own special accent to

the cry, their own special patois. Consider, for examples, the set of cries given by Kastner that were sung by an assortment of potato sellers. We have already seen the model “formula” in example 4.1, with its minor third oscillation between Ab and F. Here we have another six variations of this call, five of which employ the minor third as a framing interval (ex. 4.3).

In paging through Kastner’s collection, one can see certain melodic characteristics that seem to be associated with the cries of differing commodities—the minor third framing interval for hawkers of potatoes, the chromaticism used in the shouts of the pea sellers, perfect fifths for milk peddlers and sellers of bread, and so forth. But this is by no means true in all cases. Many of the calls vary considerably within a given group, and conversely, there is a good deal of similarity among many calls between groups. D’Ortigue’s claim that “each seller” had a specific call that would uniquely designate that ware being sold seems to be an imagined conceit. Still, there was no doubt that Kastner was on to something with his idea of *formules primitives* by which many of these cries could be grouped.

So what of the tonality? Were there the examples of plainchant modes that d’Ortigue suggested? Kastner actually found very few. He did occasionally hear

melodic phrases of several traditional calls reminiscent of some traditional forms of the ancient tonality. This character, as we know, is preserved in most village airs; but also in the field songs of the farm workers, which are characteristic of all rustic songs, and possesses generally a rather pronounced archaic color in terms of the intonation (Kastner, 82).

One example might be the cry of a peddler selling a pastry known as a *plaisir* (ex. 4.4*a*) and in which a distinct first-mode flavor is conveyed by virtue of the natural (unraised) seventh. Another is a call by a Jewish haberdasher that possesses a plagal (Hypodorian) quality (ex. 4.4*b*).

Just as common, though, were cries in which a modern tonality might be inferred. In each of the calls shown in example 4.5, one might hear the expression of a minor key including the raised leading tone. But one wonders whether Kastner’s transcriptions and analysis might more often impose a tonality on the calls. For instance, does the simple two-note cry sung by a sponge seller (ex. 4.5*c*) actually represent a close on the *note sensible* that is “sprightly enriched” by the addition of an appoggiatura as Kastner thought (98)?

Other calls could not be so easily categorized. Few of them had any obvi-



**MARCHAND de pommes de terre.**  
Allegro.

N° 85  Heu! les pomm' de terr', les pomm' de terr'!

Id: Allegro.

N° 86  Ha! les pomm' de terr' au boisseau; des bons Chastanalis.

Id: Allegretto.

N° 87.  Ah! les pomm' de terr' au boisseau est d' la jaun' eau bois -  
seau Deux sous l' quart la bell' jaun' deux sous l' quart.

**MARCHAND de pommes de terre.**

N° 88.  Ah! des pomm's au boisseau, des pomm's au boisseau.  
des pomm's au boisseau, des pomm's au boisseau.

Id:

N° 89.  Pomm' de terr' au b'sseau.

Id: GROSSE VOIX.  
Allegro.

N° 90.  Oh! les pomm' de terr' les pomm' de terr'

Example 4.3. Kastner, *Les voix des Paris*. Six calls of potato sellers (plate 14, ser. E).

a. *Id: Vivace*  
 N° 13.   
 Ré - ga - lez - vous mes - dam', voi - là l'plaisir!

b. *Id: Lentement.*  
 N° 19.   
 Cha - peau à vendr', vieux bas, vieux chif - fons;  
 ferrail' à vendr', v'la le mar - chand d'ha - bits

Example 4.4. Kastner, *Les voix des Paris*. Two “modal” street calls, of a pastry vendor (a; plate 11, ser. E) and of a haberdasher (b; plate XXIII, series G).

ous type of tonal closure; often it was more of a gestural punctuation as we hear in the cry of a mackerel seller that ends with a descending *port à voix* (ex 4.6a), or the *jettez* that ends the call of a herring monger (ex 4.6b).

Not that there were no unambiguous examples of modern tonality. Clear examples are found in the instrumental fanfares that were sometimes sounded by the more sophisticated of the merchants to announce their wares, such as a trumpet signal in C major played by (or for?) a milkman (ex. 4.7a).

And in one of the most extraordinary examples Kastner recorded, a chimneysweep and his young assistant sang a beautiful call-and-response that was almost operatic in its effect (ex. 4.7b). Both workers, he noted, had unusually fine voices. It was “the most astonishing and most pleasant-sounding cry that we had ever heard” he exclaimed, one that could easily be put to service as an excellent motive for double counterpoint (101). But these last examples were the exception. It was rare to find any street vendor with the voice of an opera singer let alone suggesting the counterpoint of a church composer.

If Kastner did not find the plainchant modes d’Ortigue claimed were there (or conversely, the obvious predilection for modern scales and keys as Coussemaker might have expected), he did find plenty of examples of rustic accents and intonations, including some with evident microtones. It was not a tonality that could be easily modeled by any single scale, to be sure. But it was an authentic voice, none the less—the accent of the folk extolled by Rousseau. “It must be confessed that not all of our small-time singing vendors are virtuosi. There are some of them who have a tin ear, who sing quite

a. **MARCHANDE d'amadou et d'allumettes.**  
 N° 4. **Ach'tez donc d'l'amadou, de l'allu-mett'; ach'tez donc**  
 d'l'amadou j'en ai d'ta bonn' d'l'amadou d'l'allumett' d'l'allumett'.

b. **Id:**  
 N° 49. **Au vi-tri-er! au vi-tri-er!**

c. **MARCHAND D'ÉPONGES.**  
**Allegro.**  
 N° 22. **Marchand d'é - pong'; marchand d'é**  
**- pong'.**

Example 4.5. Kastner, *Les voix des Paris*. "Leading tones" in calls of a matchstick girl (a; plate 20, ser. F), a window washer (b; plate 25, ser. H), and a sponge seller (c; plate 21, ser. F).

badly, and even *à la turque*, with all sorts of strange inflections, quarter tones being only the beginning" (83). But for all their peculiarity,

these humble melodic violets blooming on the pavement of our streets . . . possess a character [that is] the most lyrical, the most melodious, the most regular, the most musical, in a word, that which is most worthy to be admitted into the kingdom of sounds by a civilized people. (81)

Kastner, as mentioned, seems not to have been aware of d'Ortigue's writings when he penned *Les voix des Paris*. But d'Ortigue soon learned of Kast-

a.

Id: *Parlando.*

N° 191.

Voyez mesdam', voilà du bien beau maqu'reau, du maqu'reau

superb'

b.

Id:

N° 200.

Hareng' à frir', à frir'!

Example 4.6. Kastner, *Les voix des Paris*. Calls of a mackerel seller (a; plate 18, ser. E) and a seller of herring (b; plate 18, ser. E).

a.

LA TROMPETTE DU LAITIER.

N° 21.

b.

L'HOMME. LE PETIT GARÇON.

N° 7.

Haut en bas Haut en bas

Example 4.7. Kastner, *Les voix des Paris*. Two calls in modern tonality: a trumpet call of a milkman (a; plate 11, ser. E) and a call and response from two chimneysweeps (b; plate 25, ser. H).

ner's study and wrote an appreciative notice of the book that appeared in 1858.<sup>3</sup> But while he thought there was much to admire in the work (possessing an "erudition that was at the same time instructive and amusing"), he suspected that the author was not always scrupulous in his transcriptions. D'Ortigue worried that Kastner missed "the primitive formula" of these calls amid their many variants, the "traditional forms" that would have been sung

by the “vieux crieurs” on the street. In their place, d’Ortigue heard “certain intonations that are evidently modern corruptions.” In other words, perhaps d’Ortigue thought he was hearing too much modern tonality in Kastner’s transcriptions.

However imperfect the result, the collection of street cries recorded in Kastner’s book struck d’Ortigue as a poignant memorial to an urban soundscape that was rapidly dying in the wake of Louis-Napoléon’s ambitious plans for Parisian urban renewal. Like the buildings and streets of *vieux Paris* that were being torn down each day to make way for Haussmann’s grand boulevards, the cries of these street peddlers seemed destined for oblivion.<sup>4</sup>

“In a few years,” he noted ruefully,

no traces will remain of these old cries, just as no traces will remain of the old city. Both will be replaced by constructions and “compositions” that are perhaps more regulated but that will be far from presenting the same character (1).

It is not difficult for us to guess that this rapid modernization of the Parisian landscape would have struck d’Ortigue as a mirror to the rapid encroachment of modern tonality in the practice of church music. (Recall d’Ortigue’s heart-wrenching cry that modern tonality had “MURDERED” the ancient tonality of liturgical chant once and for all.) Thus, the ancient tonalities heard in the oldest street cries were as much victims of these modernist forces as were the old buildings and narrow streets facing the “sledgehammer of the architects who are destroying what remains of old Paris” (1).

#### THE *CHANSON POPULAIRE*: SOME LESSONS FROM BRITTANY

If Kastner’s study did not supply d’Ortigue with the evidence he had hoped for concerning the persistence of ancient tonality in the calls of the street peddlers, there was another repertoire of vernacular singing in which the preservation of ancient tonality seemed more compelling. It was the traditional folk songs of French peasants, the vaunted *chansons populaires*. In the many folk songs that were still widely sung and passed on orally in the various provinces of France, many listeners claimed to hear distinct traces of Gregorian tonality just as promised by d’Ortigue. But the evidence, once again, was hardly conclusive.

Folk music, as we well know, garnered unprecedented attention in the

Romantic imagination. Following the footsteps of Herder, who at the end of the eighteenth century did so much to raise awareness of German folk music, enthusiastic folklorists across Europe soon began scouting out rural enclaves from Scotland to Sardinia, Galicia to Georgia, in order to record the melodies and lyrics of the peasants and thereby compile nationalist anthologies of native folk traditions.<sup>5</sup> French scholars and musicians lagged behind their counterparts in England and Germany in this field of nascent ethnography; whereas notable collections of English and German folk tunes had already been published by the first decade of the nineteenth century, the first concerted efforts in France to record and publish specimens of the *chanson populaire* had to wait until the 1830s. But when attention was finally focused on the project, we find troops of French folklore enthusiasts soon tramping through remote villages and rural enclaves in distant provinces (*la France profonde*) in order to record the ancient songs of the people.<sup>6</sup> Some of the first efforts of this ethnography can be seen in the series of *Chants et chansons populaires de la France* launched in 1843 by the Parisian publishing house of Garnier Frères, which aimed to present an illustrated anthology of folk songs from across the nation. While none of these volumes (eventually twenty-seven in number) would be mistaken for a scholarly edition, the chatty introductions for each song along with appealing engravings and simple settings of the tunes with piano accompaniment made them an immediate hit with the French public. (Look ahead at fig. 5.1 [p. 159] for a typical illustration of one of these chansons.)

Not surprisingly, the government soon stepped in to coordinate this important national project. On September 13, 1852, the “Prince-President” of the newly constituted empire, Louis-Napoléon, issued a decree directing his “Minister of Public Instruction,” Hippolyte Fortoul (1811–56), to oversee the collection of folk songs along with vernacular poetry, fairy tales, and epics from every province in France in order to form a comprehensive anthology of native folklore.<sup>7</sup> Louis-Napoléon’s aim with this directive, as one might expect, was not entirely disinterested, since the peasantry was an important constituency that had supported his election in 1848 as well as the referendum that had ratified his self-coup three years later. Most importantly, in the aftermath of the many disorders that had wracked France since his inauguration, Napoléon saw folk traditions maintained by the peasantry as a bulwark of the conservative, nationalistic values he promoted: wholesome sentiments of loyalty to family, church, and *Patrie*. What better monument could there be to the purity—and unity—of the French soul than to collect and honor its most distinctive, authentic, and expressive folk art?<sup>8</sup> But once

again, the music of the people was far less unified than many of its urban champions imagined; for the *chanson populaire* proved to be a surprisingly unruly repertoire.

In the previous chapter, we heard Joseph d'Ortigue tell us in no uncertain terms that the authentic tonality of the people was that of the ancient church modes. The popular songs heard in countryside villages, he assured us, were largely based on these older scales. If there was any trace of modern tonality, he thought, it must mean that the songs are of more recent vintage, or perhaps the result of adulteration by contemporary tastes.

For d'Ortigue, the most compelling criteria for authenticating the vintage of a song was the presence—or more accurately, the absence—of the leading tone (*note sensible*). He was certain that a true folk musician would never sing a raised seventh if it was not part of the original tonality of the song. This could be proven by a simple experiment. Just find peasants who were not so exposed to the modern arts (“who were not situated in a perch of privilege, and far removed from any academic, literary, or musical institution”) and have them sing two melodies, one ancient and one modern. They will always prefer the former, d'Ortigue declares confidently. “Most remarkably, they will usually change the modern one into their favorite old tonality by suppressing nearly everywhere the leading tone.”<sup>9</sup> This was the result of the musical taste of the common, pious folk, which was shaped by their familiarity with the chant they heard and sang in church.

D'Ortigue's arguments were not new ones. Perhaps his earliest and most remarkable predecessor was a cleric named Joseph Mahé (1760–1831) writing in 1825. We have already read a bit of Mahé's prose in chapter 2, where we heard him lamenting the intrusion of leading tones in minor-mode church chants. But his main concern in the text from which I quoted was not sacred music; it was the popular tunes and dances of his native Morbihan, a region on the southwestern coast of Brittany.<sup>10</sup> Since his earliest youth, it seems, Père Mahé was fascinated by the history and folk traditions of Morbihan, including its vernacular music. Over the course of several decades, he transcribed the songs and dances of its local inhabitants, a project that would eventually comprise well over 250 different tunes. Preceding by several decades many of the better-known collections of Breton folk music that we will review in this chapter, Mahé's study was one of the first notated collections of folk music to be published in France. While his book of 1825 only contained forty pieces (all, incidentally, without lyrics or citations), scholars have only recently begun to study another two hundred or so that remained in manuscript.<sup>11</sup>

In analyzing the *tonalité* of these tunes (Mahé had quickly picked up the

AIRS MINEURS SANS NOTE SENSIBLE.  
Airs dans le mode de RÉ.

The musical score is presented on eight staves. The first two staves are in 6/8 time, the third in 2/4, and the remaining five in 2/2. The music features various rhythmic patterns, including eighth and sixteenth notes, and includes trills marked 'tr'.

Example 4.8. Three minor-mode dance tunes in the key of D “without a leading tone” from Mahé, *Essai sur les antiquités du département du Morbihan*, 365, insert p. 5.

term after reading Choron, whom he generously acknowledges as a major inspiration), he discovered that among those that could be classified as minor, not a single one of them used a leading tone. Almost the opposite was true for major-mode tunes, however, where the leading tone seemed ubiquitous. In example 4.8, we see three tunes illustrating quite clearly an *air mineur* in D “without a leading tone.” (Given their lively rhythms and binary structure, these tunes are almost certainly dance pieces.) In example 4.9 are two major-mode tunes where the omnipresent leading tone points to a modern tonality.

One concludes from Father Mahé’s study that minor and major modes in folk practice seem to represent two differing kinds of tonality. The minor-





Example 4.9. Two major-mode tunes from Mahé, *Essais sur les antiquités du département du Morbihan*, 365, insert p. 1.

mode tunes he notated reflect an older tonality rooted in the church modes, one where the leading tone is never present. “All across France,” he deduced with evident confidence,

the people sing an infinite number of hymns and songs whose keys are in minor and where the leading tone is never heard. Not a single person notices the absence of this semitone, and musicians themselves sing them without being shocked at all.<sup>12</sup>

Quite the contrary, when a leading tone is imposed upon one of these minor-mode pieces, the results are “pretentious and affective” (*minauderie*) (Mahé, 366). Major-mode pieces, on the other hand, do seem to use the leading tone routinely, though Mahé suspects this might represent a later practice.

Another anthology of Breton folk music that appeared after Mahé’s publication seemed to confirm these findings, though not without a few complicating details. In 1839, Théodore Hersart de la Villemarqué (1815–95) authored a major publication dedicated exclusively to the Breton *chanson populaire* called the *Barzaz Breiz* (“Songs of Brittany” in the Breton language).<sup>13</sup> This



Figure 4.1. Villemarqué writing down a Breton folk song.  
Engraving by Ernest Boyer, 1845 (public domain).

was a landmark study of Breton folk music that soon garnered widespread attention across Europe with translations into English, German, Italian, and even Polish. Not only had Villemarqué apparently transcribed from the mouths of Breton peasants the lyrics to over a hundred songs in the Breton language (see fig. 4.1), he produced a poetic French translation of all the lyrics as well as a scholarly essay of the folk-song traditions of Brittany. The poetry seemed of extraordinary vividness and vigor. The historical ballades (called *Gwerzioù* in the Breton language) were particularly striking in conveying in epic song something of the rich history of this Celtic race, with all their colorful tales of Druid priests, forest elves, sea adventures, and heroic battles. Then there were the distinctive Celtic instruments of the Bretons, including the *biniou* (bagpipe) and *bombarde* (a kind of shawm). Thanks to the work of Villemarqué (or “Kermarker” as he was named in the Breton language), Brittany began to be recognized as possessing one of the most distinctive literary and musical traditions in all of France, one that connected this northwestern enclave to a broader Celtic diaspora. (Tiersot memorably called Brittany

the “Conservatory” of the French Chanson.) For many Romantically inclined French readers of this anthology, it was nothing less than a revelation of the folk genius that had lain unknown until this translation. Georges Sand remarked that she found the epic ballads of Brittany in the *Barzaz Breiz* to be more beautiful than the *Iliad*. Indeed, few publications of vernacular folk literature made such a spectacular impact on the Romantic imagination since the appearance of Ossian’s poetry in the last century. Unfortunately, as with Macpherson’s legendary bard, there were soon questions raised about the authenticity of Villemarqué’s *Barzaz Breiz*. Many of the lyrics were discovered by scholars to be of dubious authenticity, suggesting fabrication on the part of Villemarqué or at the least a great deal of license in augmenting his translations with his own words.<sup>14</sup>

Since he was not a musician, it is not surprising that Villemarqué concentrated mainly on the lyrics of the Breton folk songs in his edition. (This was common to most early folklorists, who normally recorded only the lyrics and stories of the songs they heard and rarely noticed—let alone notated—the music.) He did include in an appendix, however, the melodies of some twenty-nine songs that he tells us were transcribed with the assistance of a colleague from the Conservatoire by the name of Jules Schaëfer who notated the tunes “with scrupulous exactitude.”<sup>15</sup> (It seems Villemarqué would sing the songs from memory and his confrere would take these down as dictation.) Given the doubt that was cast over the authenticity of the lyrics in his collection, one might also wonder how accurate some of the musical transcriptions are, or at least how accurate his memory was.<sup>16</sup> In any case, over several later editions, Villemarqué had augmented the number of tunes in his book so that by the third edition in 1845, there were forty-six songs notated in the appendix, a few of them set to a simple piano accompaniment that was composed specially for his edition by a German musician “of merit” he names as M. F. Silcher (Villemarqué, xix). By the ninth edition in 1893, this number of recorded songs had grown to seventy-three.

Villemarqué observes that many of the Breton songs based on religious themes (called *cantiques*) could well have started out as chants sung in church. Presumably this would be the case with the *cantique* “Ar Baradoz” (Paradise) shown in example 4.10. The melody starts out in a tonality that seems plausibly to lie in the ambitus of the second (Hypodorian) church mode with the normal unraised seventh. But two sharps on C are then sounded at cadential points that seem to suggest a more modern, tonal sensibility (perhaps a folk instinct for *musica ficta*?). The mixing of both raised and lowered seventh degrees within the same song actually proves to be quite common in Villemarqué’s collection.

AR BARADOZ.

Je - zus! pe - ger braz vo

Pli - ja - dur ann e - neo, Pa -

- vint di - rak Dou - e, Hag enn he

ga - ran - te; Pa - vint di - rak Dou -

- e, Hag enn he ga - ran - te.

Example 4.10. "Ar Baradoz," from Villemarqué, *Barzaz Breiz*, 4th ed. (1846), vol. 2, app., p. 56.

ANN EOSTIK.

*Allegro vivace.*

Greg iaou-ang a Zant - - Ma - lo,

deac'h, Greg iaou-ang a Zant - - Ma - lo,

deac'h, D'he fe - nestr a we - le, d'ann neac'h.

- - D'he fe - nestr a we - le, d'ann neac'h.

Example 4.11. "Ann Eostik" from Villemarqué *Barzaz Breiz*, 4th ed. (1846), vol. 2, app., p. 16.

Yet another example of an ambiguous tonality can be seen in the melancholic tune titled "Ann Eostik" (The Nightingale), reproduced as example 4.11. The first three phrases (of two, five, and three bars, respectively) seem to point well enough to a G (major) tonality within the compass of the authentic diatessaron. But when the long ten-bar fourth phrase is heard, an F♯ sounded in bar 14 suggests a Mixolydian flavor. Matters are then complicated in the

The image shows a musical score for a Breton song. It consists of four staves of music. The first staff is numbered '40' and has a treble clef with a key signature of one flat (Bb) and a 3/8 time signature. The lyrics are: 'Jezuz pegher bras vé Plijadur ann é-né, Pa vez e gras Dou-é Hag enn he ga-ranté; Pa vez é gras Dou-é hag enn he ga-ranté.' The notation includes various rhythmic values and accidentals, with some notes marked with a sharp sign.

Example 4.12. “Jezuz pegher bras vé Plijadur ann éné,” from Herry, *Eunn dibab toniou evit kannaouennou santel*, 24–25. Courtesy of the Newberry Library.

final four bars with a Bb in bar 17 and a close on D. Perhaps we were in some kind of minor mode all along? (In the first edition of the *Barzas-Breiz*, the song was notated without a sharp in the signature, suggesting that his transcriber might have also had this as a first impression.)

Based on the collection of songs recorded by Villemarqué, it seems evident that there was a great deal of variety in the folk music of Brittany. Certainly, consistency in tonality did not seem to be a priority among Breton folk singers. As mentioned above, Villemarqué had no musical training, so it is not a surprise that he failed to address any technical question of tonality regarding the tunes he dictated to his colleagues. But one sees in the notated tunes a mix of both *tonalité moderne* and *tonalité ecclésiastique*. (Oddly, for those who many think it a ubiquitous feature of all Celtic music, there is not a single song in Villemarqué’s collection that seems to be based on the pentatonic scale.) In addition, we find the odd phrasings, quick modal changes, angular contours, and shifting meters that were all considered characteristic of the Breton chanson. Like the craggy shores of the coastline hugging Brittany, the physiognomy of Breton folk songs seem unrefined, primitive, and rough—precisely why they were so appealing to many observers of the time.

Three years after the publication of Villemarqué’s *Barzas Breiz*, a cleric from Quimper named Abbé Jean Guillaume Henry (Iann-Wilhou Herry) published an edition of Breton *cantiques* that makes an interesting comparison with Villemarqué’s collection.<sup>17</sup> Possessing a better command of music than Villemarqué (and, it seems, of the Breton language), he was convinced that many of the *cantiques* sung by Breton peasants were modeled on the measured plainchant that was still widely sung in Brittany at the start of the nineteenth century. Example 4.12 reproduces one of these tunes, one we have just seen reproduced by Villemarqué: “Ar Baradoz.” It is interesting to see that Henry does not include any of the ficta notes we saw in example 4.10, keeping the tune entirely in a plagal natural minor mode with a final on A. This

might confirm that Villemarqué's own memory of the tune was faulty and influenced by his sentiments of modern tonality. Then again, it is hardly out of the question that there were differing singing traditions that each transcription reflects.

It is not that the Abbé Henry was a purist when it came to accidentals in these songs; there could also be Breton sacred songs in minor modes that freely use the *note sensible*. For example, in a short sixteen-bar *cantique* titled "Mar kirit ober orezon" (not shown here), a G# leading tone serves as a decorative lower neighbor to the tonic A in three places (13). Still, it is striking that the vast majority of the minor-mode *cantiques* collected in Henry's edition do seem to conform to the church modes—or at least they seem to favor the use of the lowered seventh degree.

We should not be surprised to see a growing trend among French folklorists linking the popular song traditions of the provinces with the tonality of sacred chant in the 1850s, for this was exactly when we see the most animated arguments among chant scholars themselves about the true nature of plainchant tonality. Many of the folklorists who began studying popular song were themselves conservative ultramontanists eager to link the two repertoires as bulwarks of traditional French values. Even if the melodies of a *chanson populaire* might not literally be based on a given chant, it was enough to show that both shared a common tonal language, thus confirming d'Ortigue's claim about the close link between the church and the people.

One example of this trend can be seen in an essay by the composer Désiré Beaulieu, who undertook a modest comparative analysis of songs collected from differing regions in or near France: the Pyrenees, Brittany, Poitou, and Flanders. In each of these regions, he discovered folk melodies that had the distinct markings of a "tonalité grégorienne."<sup>18</sup> Indeed, in his pamphlet, he cited at least one representative melody for each of the eight classical church modes, though he did note that the first and second tones (on D and E, respectively) seemed to predominate. Typical was a first-mode "Chanson Béarnaise" that he had himself heard sung by a native peasant during a hike through the Pyrenees (Bagnères-de-Luchon) in 1828 and shown in example 4.13.

This little tune, he notes, is "entirely in the original scale of the first church mode." Most characteristic were the use of raised sixth and lowered seventh scale degrees (B and C) along with a "dominant" recitation tone on A. The lack of a leading tone may at first strike us as quite "strange" and "austere," Beaulieu admits. "However, despite those features of a tonality that seem to us today to be inauspicious, I do not hesitate to say that this melody, far from displeasing to the ear, will be found to possess a most beautiful quality by all who hear it" (Beaulieu, 6). As if to authenticate its antiquity,

№.1. *Chanson Béarnaise.*

*Andante*



A-qué-rés mour-ti - nés, qui ta hau-tes  
soum. m'empê--chen de' bê-----de mas a--mou oum soum.

Example 4.13. First-mode “Chanson Béarnaise” in Beaulieu, *Mémoire sur quelques airs nationaux qui sont dans tonalité grégorienne*, app., p. 1.

he assures us that it is a melody “sung in the highest mountains by inhabitants who rarely venture into the valleys, and where this tune is virtually unknown.” Meaning, too, these were peasants uncontaminated by the tonality of more urban—and presumably modern—music.<sup>19</sup>

And the evidence kept coming in. A year after the appearance of Beaulieu’s little pamphlet in 1858, another song catcher by the name of Auguste Le Jolis published a short study of folk songs from his native Cherbourg (in Normandy) and came to much the same conclusion regarding the modal quality of the music and its roots in Gregorian chant.<sup>20</sup> The composer Salvador-Daniel observed a predilection for the Hypodorian mode in the songs he heard in the French Alps. And as far away as French North America, Ernest Gagnon claimed the folk songs of his Quebecois compatriots imported from the homeland were consistently modal in character.<sup>21</sup>

For many of these musical folklorists, the leading tone became the key to authenticating the true pedigree of a folk song. We have seen how d’Ortigue was certain that real folk singers would never sing a semitone below the tonic note if it was not part of the original tonality of the song; their penchant was always to sound the subtonic at a cadence. For some, this predilection became a dogma. Alexandre-Joseph Vincent, who was one of the academic members of Louis-Napoléon’s committee charged with writing the guidelines for the transcription of *chansons populaires*, insisted that the absence of a leading tone was one of the key ways to assess the authenticity of any folk song. This is because a folk song

differs from contemporary songs not only by the absence of any consistent meter and rhythm but by two other characteristic features: (1) the

song may end on a note other than the tonic . . . and (2) the song can lack a leading tone, which is to say the scale degree immediately below the tonic that differs only by a semitone and that is normally found in modern tonality, particularly in the major mode but also sometimes in a minor mode when the progression ascends [to the tonic]. On the contrary, it here differs by a whole tone. . . . These two cases . . . can be described in a simple and practical way by saying that they resemble the cantilena of a plainchant melody.<sup>22</sup>

It is not a surprise that the subtonic became one of the most distinctive markers of folk music. Vincent called it a “seal of antiquity” (*cachet d’antiquité*) that reveals the authenticity of a song’s provenance (95). Berlioz, who grew up in the countryside of Dauphiné listening to the local singers, thought the flattening of the *note sensible* gave this music its “melancholic character.”<sup>23</sup> And it certainly seemed true that any composer wanting to convey an air of rural peasantry (not to mention religious piety) in their music could not do much better than to employ a lowered seventh as a characteristic note of the scale. With tongue in check, we might be tempted to call it a “mollification” of the hard—*obdurate*—leading tone. It was a well-used topic that could convey a quality of rustic tranquility to any song that the French might label as “pittoresque.” It is no wonder that the American musicologist Ralph Locke has called the lowered seventh “the single most distinctive sign of temporal or geographical displacement in Western music of recent centuries.”<sup>24</sup>

Just as the diatonic modes were appropriate to the contemplative needs of church song because of their neutral, almost passive quality (lacking, of course, the appellative energy of a leading tone), so, too, were they suited to convey something of the simple cares and idyll of the peasantry. This popular preference for church modes in the *chanson populaire* made perfect sense to d’Ortigue, since he was sure that the repertoire of Gregorian chant was itself historically rooted in popular practice. In other words, many of the oldest chants of the church began as songs of the people. This was a favorite theme of many of the ultramontanists in France. (And it is why Danjou’s journal on chant reform was titled *Revue de la musique religieuse, populaire et classique*.)

If many observers were eager to link the *chanson populaire* to the music of the church, however, others looked elsewhere. The composer and music historian Louis-Albert Bourgault-Ducourdray (1840–1910) agreed that the urtonality of the common folk was that of a premodern tonality. But it was not the one found in the ecclesiastical modes of the church; rather, it was



something much older: the classical modes of ancient Greece. Bourgault-Ducourdray came to this insight after traveling to Greece in 1874 in order to study the music of the region—both the sacred chant of the Greek Orthodox church as well as the popular songs of the countryside.<sup>25</sup> During the four months of travel around the Aegean coast, with extended stops in Athens, Megara, Constantinople, and Smyrna, he discovered “an inexhaustible musical mine” of diatonic scales that far exceeded the narrow system of eight ecclesiastical modes not to mention the two modern modes of Western music. He was fortunate enough that shortly after his return to France, Gevaert published his monumental study of ancient Greek music.<sup>26</sup> Thanks to Gevaert’s work, Bourgault-Ducourdray understood—so he tells us—that these songs were precious vestiges of a rich modal legacy that could be traced back two thousand years to ancient Greek practices that had all but disappeared elsewhere in Europe.

It is interesting that Bourgault-Ducourdray dispenses with the term *tonality* to describe these older scales. Perhaps Gevaert had persuaded him that *modality* (*modalité*) was a more historically accurate term in talking about medieval and Greek tone systems. A mode, Gevaert had pointed out in his study, is “the order of intervals in an octave” or a “schema of tones and semitones,” whereas a tone (or *tonus*) is a specific transposition of a scale (Gevaert, 209). Thus, the term to describe the modern transposable *tone* system—*tonalité*—is not really appropriate to use in describing the set of eight ecclesiastical modes let alone the ancient Greek modes.<sup>27</sup>

In any case, based on his reading of Gevaert, Bourgault-Ducourdray was able to identify twelve diatonic scales that were still utilized by modern Greek singers. These twelve scales could be easily generated by taking the three types of the classical diatonic tetrachord (STT, TST, and TTS, where the semitone S is fixed at the bottom, middle or top of the tetrachord, respectively) and disjunctly connecting them to create octaves in either “tonic” or “dominant” versions. (This corresponds, respectively, to the authentic and plagal species of the medieval modes and the “arithmetic” and “harmonic” divisions of the octave.) In example 4.14, we see a table of all twelve diatonic scales along with their ancient Greek names, though Bourgault-Ducourdray noted that not all of these scales were actually recognized in classical Greek theory. The bottom two scales (a “dominant” scale on G and a “tonic” scale on C) represent versions of the modern major scale, unknown to Greek theory.

To these twelve scales, Bourgault-Ducourdray adds three other chromatic variants. There is a “chromatic” scale and a “semichromatic” scale that both seem to have been common in Byzantine practice. And then there was an

**TABEAU DES DOUZE GAMMES DIATONIQUES**

Mode dorien (division arithmétique) (12)      Mode hypodorien

phrygien      hypophrygien

lydien      hypolydien

mixolydien      dorien (division harmonique)

éorien de Westphal      Division de l'octave de sol inusitée dans l'antiquité.

Division de l'octave de sol inusitée dans l'antiquité.      Division de l'octave d'ut inusitée dans l'antiquité.

(Gamme mineure renversée)      (Gamme majeure)

Example 4.14. Twelve diatonic scales, from Bourgault-Ducourday, *Trente mélodies populaires de Grèce et d'Orient*, 16.

Example 4.15. "Chromatic Oriental Scale," from Bourgault-Ducourday, *Trente mélodies populaires de Grèce et d'Orient*, 20.

"oriental chromatic" scale heard commonly among Turkish singers that utilizes "quarter chromatic" tetrachords (in which two semitones frame an augmented second) disjunctly combined (see ex. 4.15).

Upon his return to Paris, Bourgault-Ducourday published the results of his journey, taking thirty of the melodies he had copied in his notes and composing a free accompaniment for piano.<sup>28</sup> Inspired by the model of Rimsky Korsakov and his circle, who were composing settings of Russian folk music in their older indigenous Slavic modes, he became convinced that these *gammes orientales* offered a fertile means for composers of his day to enrich their music with new expressive resources and colors, and his arrangements were meant to illustrate how these sounds might be adapted by composers today. The major and minor system of modern tonality, he warned, was now nearly "exhausted" (Bourgault-Ducourday, 9). These Greek modes offered composers in the West a path of renewal and inspiration. Just as composers

had begun to write their own sacred music using the modes of ecclesiastical chant, composers could also turn to the even older collection of Greek modes for inspiration and revitalization of their musical language.

In a lecture that he delivered in 1878 at the Universal Exposition at the Trocadéro on September 7, Bourgault-Ducourdray expounded on this idea.<sup>29</sup> After giving a small theory lesson to his audience on how the Greek modes differed from the major and minor scales they would have been used to, he illustrated on the piano how a simple French ditty ("J'ai du bon tabac") sounds when transposed to each of these ancient modes. He then went on to drive the point home by having a chorus perform a number of original four-voice settings of Greek melodies that he had taken from Gevaert's study (Bourgault-Ducourdray, 15–18). While the sounds of the music may be like some "exotic perfume," he noted, it was a modal language that could be found in selected passages of Berlioz, Saint-Saëns, Gounod, and even Rossini (27), musical excerpts of which he also played on the piano. By exploring the polyphonic combination of voices set in these modes along with the manly rhythms of the orient, composers today had an entirely new resource for musical renewal. To the evident approval of the attending audience, Bourgault-Ducourdray concluded his speech,

Our two modes, major and minor, have been fully mined such that we have arrived at a point where new means of expression are needed to help rejuvenate the musical language. This has nothing to do with rejecting the achievements of the past or taking away any resources of modern music. On the contrary, it is to enlarge the domain of melodic expression and to furnish new colors for the musical pallet. (Applause). In this way, we can resolve a problem that is today as pressing as ever: to be new, yet to remain simple. (Renewed applause). (48)

Before leaving Bourgault-Ducourdray, though, we might note that several years after his ethnographic work in Greece, he returned to his native Brittany for some fieldwork.<sup>30</sup> By then, Bourgault-Ducourdray had become appointed the first professor of music history at the Paris Conservatoire. Traversing many of the same towns and villages that Villemarqué had visited almost fifty years earlier, Bourgault-Ducourdray was delighted to realize that many of the songs he remembered from his childhood could be cast perfectly into some of the modes he had heard in Greece. (Only the Lydian and Mixolydian modes seemed to be lacking in Brittany, he noted.) And of the diatonic modes, the ancient Greek Dorian mode (on A) and the Phrygian mode (on G) were the most common. Once more, he collected thirty of his favorite

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### LE PARADIS (1)

Lento 52 = ♩. Doux.

CHANT

PIANO

Je crois au pa - ra -

- dis. - Jé - sus nous l'a pro - mis. - J'es - père al - ler un jour Au

glo - ri - eux sé - jour. - J'es - père al - ler un jour Au glo - ri - eux sé -

\* dernière strophe

- jour. - sein du pa - ra - dis. *dim rit.*

(1) Poésie française imitée de la version du BARZAZ BRÉIZ du V<sup>le</sup> Hersart de la Villemarqué.  
\* Pour l'accomplissement du dernier couplet, passez à l'autre «signe».

8994. M.

Example 4.16. Bourgault-Ducourdray's setting of "Ar Baradoz"  
in *Trente mélodies populaires de Basse-Bretagne*, 58.

tunes and arranged them with a piano accompaniment.<sup>31</sup> One of his songs overlapped with the seventy-three Villemarqué had included in the latter editions of his study. It was the "Ar Baradoz" cited in example 4.10 (and again in ex. 4.12). Bourgault-Ducourdray's setting of this tune, given in example 4.16, has a lilting, berceuse-like quality, while its tonality seems similar to the Niedermeyer organ accompaniments we looked at briefly at the end of chapter 2 by adhering rigorously to the modal scale of the tune shorn of any *ficta* in both melody and accompaniment.<sup>32</sup> This makes the rather odd two-

bar purple patch of Wagnerian chromaticism and Picardy third played by the piano at the end all the more curious.

Bourgault-Ducourdray called such a harmonization an “acclimatization” in that the arranger is taking a folk song from its native (monophonic, folk) habitat and transplanting it into the foreign, urban soil of the bourgeois parlor song.<sup>33</sup> As usual, Bourgault-Ducourdray waxed enthusiastically about the sounds of these folk songs. The quality of the modes gave an exotic and evocative character to each song, one that seemed to reflect the special character of the Breton peasant. Ironically, his notion of modal quality brings us back to the ancient understanding of modes taught by many Greek writers, in which a mode has a specific character, affect, or “mood” based on its scale structure and usage. These qualities were sometimes difficult to identify empirically. (We recall his description of them being like an “exotic perfume.”) Above all, it seemed that each mode had a certain color to it. These modes, as he reminds us, are capable of furnishing a composer with “new colors for the musical pallet.”

#### EXCURSUS: TONALITY AND COLOR

Let us pause here a moment to reflect a bit on what Bourgault-Ducourdray means when he says that the modal resources of ancient Greek music will provide “new colors for the musical pallet” of composers. His metaphor suggests that the notion of musical tonality had begun to take on some shadings of meaning drawn from painting. Such a linkage is explicit in a harmony treatise published a year after the death of Fétis by Alexandre Marchand, who wrote, “Sounds combine in the ear of the musician as do colors in the retina of the painter or words in the thoughts of a poet or orator. Through such a combination, sounds acquire a value of tone that we will call tonality.”<sup>34</sup> Tonality, then, was understood not as (or not only as) a technical term of scale organization, appellative relations, or tonal hierarchy, but in a more abstract sense of coloring or shading. This is why Marchand could go on to advise the composer that the writing and voicing of harmony requires the same sensitivity to subtle shadings and nuance as the painter employing colors. The play of tonality in this sense was as much an affect as it was an empirical attribute. Such is surely the way Vincent d’Indy used the term in describing a work of Cesar Franck (his Oratorio *Redémption* from 1871):

Struck by the alternation of light and shade of which the poem admits, Franck believed that a well-established gradation of those musical tints

we call tonalities would alone suffice, by means of opposition and contrast, to render the various shades of colour so clearly suggested by the text.<sup>35</sup>

But the borrowing went in both directions; as we will see, the term *tonality* was also applied by painters and art critics in the nineteenth century to describe subtle hues and shadings of color in the visual arts.

The linking of musical tone with color is actually an old one in history. Since the ancient Greeks, *chrōma* (χρῶμα) has had a place in music theory as a way of speaking of the two semitones that constitute the *pyknon* of the chromatic genus. Aristoxenus speaks more generally of a shade (*chroa*) for any of the two moveable notes within a tetrachordal genus.<sup>36</sup> Conversely, when painters talked about tone, it was similarly to speak of shadings of color. In the *Dictionnaire de l'Académie française* in 1835, we read a definition for "Tone, in terms of painting" as "shadings following their different nature and their different degree of force or brightness."<sup>37</sup> In a dictionary of art terms published shortly after this, a more expanded definition of tone is found, one in which an explicit musical analogy seems to be drawn:

Tone is the degradation, the opposition, the play of various nuances of a color, or the various degrees of intensity of shading in a colored object according to the harmonic system peculiar to painting. . . . A picture is said to be of a beautiful tone when the scale of the tones of which its harmony is composed is extended.<sup>38</sup>

"Tonality," which was a substantive analogue of "tonal," must thus have filled a need for art critics who were looking for a way to describe subtle shadings of color and light in paintings or etchings. Writing in 1838, the Swiss painter David Sutter noted the aptness of this new musical term for artists, clearly drawing on Fétis's close association of tonality with scales:

The laws of tonality in painting resemble those of musical tonalities, which served to name them. What is the effect of a tableau if not a rhythm of ideas on which the colorist establishes a chromatic effect? Now we see that the great [musical] masters distinguish themselves in regard to this first aspect because they are drawn largely to certain colored scales [*gammes colorées*] that please them and that they use for differing modes in their composition. The scale is apposite to the idea that guides the artist, even those scales that are carefully bound to harmony. . . . In music,

one knows better how to exploit the notions that we will attempt to describe. All chromatic scales possess a well-known physiognomy from which a composer may make the best of in order to establish differing moods suited to his ideas. Painters operate much like musicians, though they may not understand all of the same philosophical foundations of harmony since they don't have the same capabilities to study these laws.<sup>39</sup>

Ten years later, the English art critic Philip Gilbert Hamerton described tonality as "the minute subdivisions of weighting of colours, as lights and darks."<sup>40</sup> A great artist like Turner, he pointed out, could easily do this with his subtle transitions of paint color. It was one of the few drawbacks of etching, Hamerton went on, that it is unable to convey "accurate subdivisions of delicate tones, or in one word, perfect tonality." But for the most talented etchers, "the feeling which strikes one, in looking at their landscapes is the harmony of tone pervading each picture, the *tonalité*, as the French critics call it." While grateful to the French for the introduction of this term (though he admitted it sounded "strange to English ears"), Hamerton went on to lament that few English artists (other than Turner) seemed capable of conveying the nuances of color cultivated across the channel. "The fact that *tonalité* has not hitherto been an English word, results from our almost universal indifference to the thing" (Hamerton, 80).

But it was not just artists who found *tonality* congenial as a term to borrow. We find the term soon appropriated across the disciplinary spectrum in the later nineteenth century by architects, linguists, philologists, literary critics, and even physicians and scientists. For example, Charles Garnier spoke repeatedly of seeking a balanced, harmonious, and pleasing "tonality" in his design for the new opera house of Paris through contrasts of color, texture, and general layout, while a linguist by the name of Camille Chabaneau measured the tonality of vowels by calibrating their "thickness" or "thinness."<sup>41</sup> One academician studying ancient prosody named Charles Aubertin Paris defined tonality as subtle shifts or variations of metrical accent and versification.<sup>42</sup> And numerous physicians used the term *tonalité* to evaluate the diastolic/systolic rate by which the heart expands and contracts or the lungs inhale and exhale.<sup>43</sup>

It would be tedious and digressive to inventory further many of these differing usages. But a word search for the term in nineteenth-century French literature can graphically show how the term multiplied in usage. In the Google Ngram shown in figure 4.2, we can see how *tonalité* began to be found in a large corpus of French publications beginning in the 1820s picking up Choron's introduction of the term, took a sharp spike upward in the 1840s



Figure 4.2. Google Ngram graph calculating the usage of the term *tonalité* in a corpus of French books published between 1800 and 1900. Google Ngram search December 29, 2017.

as Fétis's arguments gained increasing publicity, and finally surged higher in the 1870s (after a brief dip), largely because of its circulation outside of music, where its usage remained relatively constant through the end of the century.

Meanwhile, in musical writings, we begin also to note slippages in the usage of the term. Whereas for Fétis, tonality remained rigidly linked to specific scale systems, more and more musicians began to theorize the concept differently or use the term in less empirical ways. Increasing numbers of music teachers used it banally as a substitute for key (as in the "tonality of C major"). Others used it to describe something closer to what older theorists called a piece's "mood" or "air," a character that was half technical and half subjective. (This was something of the way Sutter used the term above, or Reicha when he talked about tonality being the "couleur locale" of a piece.<sup>44</sup>) Still others used it as a synonym for *timbre*.<sup>45</sup> Whatever else one may say about Fétis, it was his writings that launched Choron's term into the greater public sphere even as it was redefined by subsequent generations of readers and appropriated for widely differing purposes.

## FOLK MUSIC AND MODERN TONALITY

So what of the arguments we heard in the previous chapter made by Coussemaker, who had suggested that the aboriginal tonality of folk music is that which we now call modern tonality? We will recall that Coussemaker claimed to find this tonal instinct reflected in the songs of the *trouvères* and other medieval singers from the north of Europe. Contrary to the ultramontanists, who argued that the musical lingua franca of the people was that of the church modes (if not the ancient Greek modes), our Flemish musicologist thought instead that it was the major and minor tonal system that repre-



sented the real folk tonality; the ecclesiastical modes were actually artificial constructs, or at least ones imposed on the Franks by the Roman church. (Coussemaker, as we noted in the previous chapter, long suspected that the original repertoire of Gallican chant, which was repressed by Charlemagne, might have had characteristics closer to our major/minor tonalities than the Byzantine-influenced Roman chant.)

Coussemaker found further confirmation of his supposition when he joined Fortoul's national project of collecting French folk music and himself undertook some ethnographic fieldwork to collect and analyze Flemish folk songs common to the small enclave of Flemings located in *France Nord* from which he himself hailed. (He even attended some of the "Philological Sections" that met between 1854 and 1857 to vet many of the contributions that began pouring in.) Coussemaker's study, which appeared in 1856, was one of the very first publications of folk music to follow the more rigorous standard of philology that had been established by Louis-Napoléon's commission. The instructions for contributors that were laid out in exhaustive detail by Fortoul gave clear directions for anyone wishing to collect and notate folk songs. Above all, one needed to transcribe both the music and the lyrics of a singer with scrupulous accuracy and avoid editing or augmenting anything not heard from the performer. At the same time, one should always indicate where, when, and by whom a given song was dictated. Fortoul recommended collecting as many versions of a song as possible from a variety of sources for comparison (whether drawn from written records or in transcriptions from the field).

Coussemaker, of course, was already well practiced in the nascent science of philology through his studies of medieval music manuscripts, so it is not surprising that his song collection reflects comparable discipline. After a careful analysis of the Flemish songs he collected (many in multiple versions), Coussemaker discovered that the vast majority of tunes were indeed in "tonalité moderne."<sup>46</sup> To be sure, there were a number that were sung in one of the church modes.

We can see one of the modal songs Coussemaker transcribes in his collection that he identifies as one of the oldest and most beloved of Flemish melodies. "De Minnebode" (Messenger of love) tells of a small bird who carries a love note to a maiden from a forlorn suiter (ex. 4.17). Coussemaker observes that an earlier version of the song given to him was found to be inaccurate, as it came from the mouth of a person "accustomed to modern tonality." Since then, he tells us, "we have heard it sung by other persons, and we did not have any difficulty realizing that this song is in a particular tonality belonging to the most ancient Flemish melodies" (Coussemaker, 168). The essential char-

DE MINNEBODE.

Daer was een sneeuw wit vo-gel - tje, daer was een sneeuw  
 wit vo - gel - tje al op een ste-kend door-ne-tje. Din don dey -  
 ne, al op een ste-kend door-ne - tje, din don don.

Example 4.17. "De Minnebode," from Coussemaker,  
*Chants populaires des flamands de France*, 166.

acter of that diatonic tonality, he tells us, lies in the absence of a single accidental, creating a song notable for its "innocence" and "purity."

We might think, then, that Coussemaker would now have to modify his claim that modern tonality was rooted in folk practice given evidence such as "De Minnebode." Far from it. Folk musicians, he noted, seemed to be able to sing both kinds of music without confusion. Contrary to the supposition of d'Ortigue that most peasant singers will tend to flatten a leading tone when possible, Coussemaker saw that both modern and ancient tonalities could peaceably exist side by side in the repertoire of popular song, just as they evidently did in the Middle Ages. As a *Vlaamse* growing up in France, Coussemaker hardly needed to be persuaded that it was perfectly possible to be bilingual in both tongue and tonality.

Coussemaker's pluralist view of folk tonality was given strong support by Jean-Baptiste Weckerlin, who published one of the first scholarly histories of the French chanson in 1886.<sup>47</sup> As the head librarian of the Conservatoire, Weckerlin had a great deal of literature for his study at his disposal, including the thousands of songs contained in the never-completed *Recueil général* of the Fortoul project.<sup>48</sup> A large amount of French popular music that he analyzed seemed to conform to modern tonality, and many of these songs were probably of ancient origin. Clearly, he concluded, it was ridiculous to claim, as Fétis did, that modern tonality appeared at one stroke the "day before yesterday" in the music of Monteverdi.<sup>49</sup> At the same time, though, Weckerlin conceded that many popular songs "from mountainous regions, from the remote corners of Brittany, along the towns and villages of the railways" seem to be in the modes of plainchant (Weckerlin, 190). The giveaway, as always, was the unraised seventh scale degree in these tunes. What he suspected happened was that many peasants simply did not know any other music than that which they heard in the church, and it was natural that

their own songs reflected this modality. But Weckerlin was also quite sure that there was a universal “presentiment” for modern tonality that eventually led singers to use the leading tone in their songs (191–92). It is interesting in this regard, he noted, that urban folks songs (*chansons des villes*) were more likely to be in a major key, while songs collected from the countryside (*chansons de la campagne*) tended to be more in minor keys (193), the latter, of course, being more easily adapted from the church modes.

Three years after Weckerlin’s study, another scholarly work was published concerning the *chanson populaire* that was the most thorough analysis yet of the genre. It was by a protégé of Weckerlin, a young librarian at the conservatory named Julien Tiersot (1857–1936).<sup>50</sup> Tiersot was one of the most brilliant observers of the musical scene in France during the Third Republic, and he left a rich legacy of writings that are today still mined by scholars. We will have further opportunities to sample some of his writings on non-Western music in chapter 5. Here we will focus on his inaugural (prizewinning) work as a young scholar on the *chanson populaire* in which he subjected the question of tonality to particularly close scrutiny. If any study might resolve the contentious issue of folk music and its indigenous tonality, this would be it.

While not undertaking extensive fieldwork himself, Tiersot collated a huge number of songs that had been collected from around France by other folklorists over the past half century and subjected them to detailed analysis. Like Weckerlin, Tiersot concluded that most *chansons populaires* were sung in a modern tonality. Indeed, he thought that this was the case at least since the thirteenth century (Tiersot, 301). By modern tonality, though, Tiersot did not necessarily mean harmonic tonality in the sense defined by Fétis. Precisely because these earliest songs were sung monophonically without accompaniment, the true origin of tonality, he felt, is found in melody. Pace Fétis, Tiersot argued that the major and minor scales do possess tendency tones (*tons attractifs*) that contain within themselves the motive forces of modern tonality. In his view, the earliest attempts at harmony in the Middle Ages were still controlled by the ancient tonality, since all of these harmonic experiments in organum and discant were built on ecclesiastical diaphony (298).

Reviewing the major anthologies of folk music that had appeared by the time of his study, Tiersot found strong evidence supporting his thesis that modern tonality emerged in folk melodies long before Fétis’s *annus mirabilis* of 1605. In the 142 songs from the fifteenth century that were edited by Gevaert and Gaston Paris in 1875, fifty-three are in a clear major tonality.<sup>51</sup> This proportion increased over the course of the sixteenth and seventeenth

centuries so that by the time we arrive at our own time, Tiersot notes, there is incontrovertible evidence that the vernacular tonality of the people is that of modern tonality. Of the 1,389 *chansons populaires* collected in over a dozen major anthologies that he analyzed, Tiersot found fully 843 of the tunes to be in a major mode (almost two-thirds of the total), leading him to conclude that "The major mode is truly the French popular mode par excellence" (300-1).

The minor-mode songs proved to be a bit less predictable and the use of the leading tone "more capricious." Because of the mutability of scale degrees  $\hat{6}$  and  $\hat{7}$  in most minor songs, a given chanson might display tonal qualities that do indeed suggest origins in ecclesiastical modes. But then again, they might not. Tiersot distinguished three basic modal types in minor: "regular" minor (with a moveable scale degree  $\hat{7}$ ), a "Hypodorian" minor (natural  $\hat{7}$  and lowered  $\hat{6}$ ), and a "premier ton" (or "Dorian" minor with a natural  $\hat{7}$  and raised  $\hat{6}$ ). Together these constitute a "Famille mineure" (308). Tiersot was prepared to accept to a point that many of these minor-key folk songs may well be rooted in an older modal practice. In reviewing Villemarqué's song collection from Brittany, Tiersot determined that twenty-eight of the seventy-three melodies were in minor, and of these, twenty-one were in the regular minor, six were in Hypodorian, and only one was in the first Dorian tone. Yet in another collection of songs originating in Bresse, he counted just eleven songs in the regular minor, whereas there were twenty-two Hypodorian songs and thirty-two in the "Premier ton" (309).

These modal examples, he thought, represent the "charming debris of our race's primitive art." But there were other songs that seemed to be harder to categorize: melodies that ended abruptly on nontonic notes, that seemed to modulate erratically without returning to the original key, that displayed odd intonations hinting at the use of microtones. Even more striking were those that exhibited inconsistent chromatic alterations of scale degrees, but especially in their use of the seventh scale degree. He found numerous songs in which the seventh was raised in a lower register but remained flat in an upper register (the subtonic). Such a song is the medieval tune "in G major" reproduced by Coussemaker in example 3.6. We can see another example of such dual tonal tendencies in a "pastoral" folk song from Poitou quoted by Tiersot and reproduced in here in example 4.18. Tiersot sees this as a confirmation of his "law of attraction." When melodies move to any extremes of a vocal tessitura, they will naturally tend back to a middle range. Thus in a lower octave, a seventh scale degree is more often likely to ascend to the tonic, in which case the tendency is to raise the degree by a semitone if it is not already a leading tone. But in a higher octave, especially at the apex of the line, a seventh degree is likely to tend downward and remain unraised

Moderato.

Que fais-tu sous ce feuil - la - ge, -

Ma ber-gè-re, qu'at-tends-tu? - J'at - tends dessous ce feuil -

la - ge Que mon ber-ger soit ve - nu !.

Example 4.18. Folk song from Poitou cited in Tiersot, *Histoire de la chanson populaire en France*, 306. Note the use of a lowered seventh (F $\flat$ ) and a sharpened seventh (F $\sharp$ ) at the high and low ends of the tessitura, respectively.

(or perhaps flattened) (305). Far from suggesting an exception to the rules of modern tonality, this variable practice proves his thesis that with all its energetic properties, modern tonality is fundamentally a melodic phenomenon to which harmony was only later adapted.<sup>52</sup> If there was any deviation from modern tonality in many of these songs, it did not lie in the underlying scale; rather Tiersot saw it in the penchant for many singers to avoid closure on the tonic in favor of some nontonic note, such as scale degree  $\hat{2}$ .<sup>53</sup>

Still, Tiersot's conclusion was unequivocal: "French popular melodies are in a large majority of cases conceived in the spirit of modern tonality, which originates in popular melody and where it finds its first use."<sup>54</sup> It was the ecclesiastical modes of the church that seemed to be the artificial construct. It is no wonder, the strongly Republican Tiersot added caustically, that church authorities seemed forever to have been policing their chant repertoire. It was ultimately secular folk music that fertilized medieval harmony with the seeds of modern tonality through its "tons attractifs."

Fétis, we will recall from the last chapter, made almost the opposite argument. It was the harmonic practice of northern tribes mixed with the modal melodies of southern people, he lectured us, that would eventually cause the alchemic miracle leading to modern tonality. But even then, it was not yet modern tonality. That was clear enough in looking at the "barbaric" harmonies of organum and discant from the Middle Ages. Harmony may have been a necessary condition for the rise of tonality, but it was not itself sufficient. We can thus understand why Fétis never accepted any arguments

concerning the popular origins of modern tonality. If tonality (that is to say, modern tonality) was an ideal that was only introduced through the genius of Monteverdi in 1605, there was no way we could speak of anticipations of this tonality four hundred years earlier. To be sure, as we saw in the last chapter, Fétis conceded there were older secular melodies (not to say harmonies) that may have had many characteristics of modern tonality. But no one at the time would have heard them in that way.

Still, we should not fail to note that Fétis remained strongly interested in the repertoire of popular song. He had no doubt that popular song could reveal much about the character of a people. The *chanson populaire*, he conceded in 1860, reflects “a general idea, a common sentiment, certain beliefs [of a people] that it transmits from age to age” (*BU<sup>2</sup>*, 1:1). This is not much different than a thought he had penned over thirty years earlier: The songs of a people are “a characteristic part of their physiognomy, of their ways, of their character.”<sup>55</sup> At one point, we may not be surprised now to learn, he even contemplated producing an anthology of folk melodies from around Europe for which he would provide piano accompaniments.

There survives a manuscript in Fétis’s hand of some fifty folk songs from over a dozen nationalities and races in just such arrangements.<sup>56</sup> We can get a sense of how ambitious a publication this would have been from the title he gave to his project:

A choice collection of popular songs from all nations classified by their origins and races; with French words and piano accompaniment. Proceeded by an essay concerning their forms, character, and the circumstances and periods of their modifications, with a historical introduction by F. J. Fétis.<sup>57</sup>

But it is hard to imagine how the listener will gain much insight into the “forms” or “character” of these songs and the people who sang them from the dainty accompaniments that Fétis provides for the melodies. Figure 4.3 reproduces one example from his unpublished anthology, in this case a popular song of Czech or Bohemian origin (members of the “Slavic race”) and having “the character of a Polish Mazurka.” The tonality, as a cursory glance at the jaunty alteration of tonic and dominant seventh harmonies in the accompaniment attests, is unmistakably modern. And this is true for all the other tunes harmonized in the manuscript.

One wonders why these tunes did not cause Fétis to pause and reconsider his thoughts about the origins of modern tonality. Perhaps he assumed all the songs he harmonized were of more recent origins. Perhaps many of them

The image shows a page of handwritten musical notation. At the top left, it is numbered 'n. 5.'. The title is 'Chants populaires des Tchèques ou Bohémiens (rac. Slav.)'. Below the title, there are two lines of text: 'L'emploi de l'émigré' and 'Précipitote'. A second line of text reads 'Chants dont le caractère est de l'analogie avec la Magyars polonoise.' The score consists of a vocal line on a single staff and a piano accompaniment on two staves. The piano part includes various musical notations such as slurs, accents, and dynamic markings like 'p' and 'f'. The handwriting is in ink on aged paper.

Figure 4.3. Fétis's harmonization of a Czech or Bohemian popular song. From the manuscript "Collection choisie de chants populaires de toutes les nations, classées par origines de races; avec paroles françaises et accompagnement de piano." B-Bc 27.933, fol. 7. Courtesy of the Library Conservatoire royal—Koninklijk Conservatorium, Brussels.

were originally sung in the older modes, and he was simply "acclimatizing" them to modern tonality, as Bourgault-Ducourdray would later call the process. Then again, perhaps he had a more subtle historical argument to make that might have appeared in his promised preface to the collection had he gotten around to writing it. Whatever the case, when Fétis finally began to address examples of early vernacular song in his *Histoire générale de la musique*, there is no suggestion at all that any of them could be considered as the avant-garde of *tonalité moderne*.

Hence, songs from the *Jeu de Robin et Marion* that had been extolled by Coussemaker as harbingers of a secular tonality pass by with minimal comment (*HGM*, 5:137–38). As for the other troubadour and trouvère songs about which Coussemaker and Tiersot made such a fuss, Fétis saw oriental influences, specifically of Arabic music that might have been picked up by returning crusaders or through contact with musicians from the Andalusian caliphate.<sup>58</sup> (We will return to this hypothesis for further scrutiny in chapter 5.) When there was a song whose credentials of modern tonality could not be ignored (in one case, a Flemish "émigré" song that has an unmistakably clear tonal outline in G minor), Fétis simply dismissed the claims of its edi-

tor that the song stemmed from the twelfth or thirteenth centuries, dryly commenting that the song instead “appears to us to be relatively modern” (*HGM*, 5:58).

There was another difference between Fétis and his rivals that is important to note here. Tiersot, we will recall, was convinced that even if the majority of folk songs were sung in a modern tonality, this did not preclude songs sung in the “ancient” tonality of the church modes—even by the same singers. But this violated a fundamental premise of Fétis’s theory, since our Belgian theorist presumed the two tonalities to be mutually exclusive. Like Coussemaker, though, Tiersot was perfectly comfortable in admitting a plurality of tonalities in any culture. And even more to the point, he realized it was perfectly possible for a song to change its tonality over short periods of time. In other words, tonality need not be an immutable quality—either in a song or of a given people. For variation and change were very much part of the nature of secular song, and so it seemed, of tonality.

#### POPULAR SONG AND ITS VARIANTS: MIGRATION, MUTATION, AND THE *TYPE MÉLODIQUE*

As Tiersot deepened his research into the *chanson populaire* after the publication of his first book in 1889 (and he would continue to do so over the next four decades), he began to notice how these folk songs seemed to migrate in unpredictable ways between widely separated populations, often undergoing substantial transformations in the process. To analyze these changes, in an article from 1894 he introduced the notion of a “melodic type” (*type mélodique*).<sup>59</sup> This was a kind of abstracted formula or archetype defined by its melodic shape and mode, and to a secondary degree, its characteristic rhythm and meter. Example 4.19 illustrates how this can work. Here Tiersot takes a G-major melodic “formula” that is found in the first two bars of a song from Brittany (“A Nante, à Nante est arrivé”). In the following five examples, we see the opening of songs from around France that utilize a recognizable version of the first tune’s phrase. This does not mean that they are all derived from the Breton *chanson* (though some filiations may well exist). But they can all be heard as utilizing much of the same melodic material. Tiersot thought that folk songs were made up of a relatively small number of archetypal melodic types that could be recognized by their general form but nonetheless manifest in multiple ways. A formula such as the one in example 4.19 might be varied in countless ways yet still be recognized as belonging to a single melodic type.

In a later essay from 1904, he develops his notion of melodic types fur-

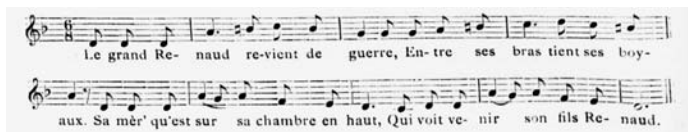


Example 4.19. “Melodic formula” found in six differing chansons.  
From Tiersot, “Les types mélodiques,” 86.

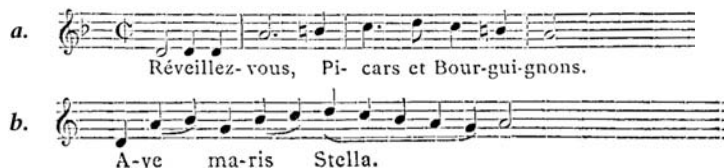
ther to test whether the concept could help scholars trace the peregrinations of a given folk song.<sup>60</sup> This is trickier to do, as we just saw, since a melodic type could be found almost anywhere, and a recurrence by no means demonstrates a direct lineage. Still, it is sometimes possible to observe a folk song mutating over “time and space” as he put it in the title of his article. Mutation, after all, was practically inevitable in any folk tradition based on oral transmission. In the case of the *chanson populaire*, it was easy to find dozens of variants. These variants could be small changes in the lyrics, melody, phrasing, or rhythm. But they could also be wholesale alterations of meter, melodic shape, and especially tonality. (And this does not even get into the question of *contrafacta*—wholesale changes of lyrics.)

Tiersot’s essay is filled with a number of striking examples of variants in song, testifying to his impressive knowledge of the folk-song repertoire that he had gained by this point. Thus, in one song from Normandy (“Qu’on bride mon cheval”) recorded in one collection in the key of G minor, Tiersot finds another version from the south of Dauphine that is sung in G major (Tiersot, 614). A song from Savoy sung in a meter of  $\frac{6}{8}$  is recorded as being in  $\frac{2}{4}$  in a version collected in Saint-Pol in the north of France. And—not surprising given the evidence we have already seen in several Breton chansons—he is able to cite many examples of folk songs sung in the ancient tonality of the ecclesiastical modes that could also be found elsewhere sung in major or minor keys.

As already mentioned, determining the exact chronology and paternity of these variants was often impossible. It turns out that synchronic comparison “in space” is easier to measure than diachronic comparison “in time.”<sup>61</sup> For example, a “modal” version of a song by no means assures its antiquity,



Example 4.20. "Le grand Renaud," Tiersot, "L'expansion de la chanson populaire dans le temps et l'espace," 610.



Example 4.21. Two early progenitors of the "Renaud" tune? An early sixteenth-century patriotic song from Picardy (a) and the eighth-century Frankish Hymn "Ave Maris Stella" (b). Cited in Tiersot, "L'expansion de la chanson populaire dans le temps et l'espace," 610.

he cautions. But there are cases, especially when the lyrics are related, when probable consanguinity can be posited. Tiersot offers a particularly remarkable example in looking at a family of variants for the popular French *complainte*, "Jean Renaud" (or sometimes, "Le Roi Renaud"). This was a song that is a classical exemplar of the *chanson* genre. (The great medievalist Gaston Paris called the song "the pearl of our folk songs."<sup>62</sup>) In Example 4.20, we find a model version of this song from Lorraine that can serve us as the prototype. Characteristic of its opening melodic type is the ascending perfect fifth, a tribrachic anacrusis, and the natural seventh scale degree at (or near) an apex of two curving arches that point to a Dorian modality (Tiersot's "premier ton").

The song, it seems, had a rich pedigree. One might, for example, see one of its earliest progenitors in a patriotic song from Picardy stemming from the fifteenth century. In example 4.21a we see a version of the tune printed in the *Odhecaton* of 1501 under the title "Réveillez-vous, Picars et Bourguignons." But the lineage can perhaps be traced back even further if one accepts that the prototype of Petrucci's melody is the famous eighth-century Frankish hymn "Ave Maris Stella"—welcome evidence for those who were seeking to tether popular folk music in France with the sacred chant of the church (ex. 4.21b).

As Tiersot is quick to concede, it is impossible to trace unambiguous filiations from an eighth-century hymn dedicated to the Virgin Mary through a patriotic ballad from fifteenth-century Picardy and then on to a nineteenth-

a.

b.

c.

d.

Example 4.22. Four variants of the “Renaud family” tune from Boulogne-sur-Mer (a), the Basque country (b), Alpes-Maritimes (c), and Bresse (d). Tiersot, “L’expansion de la chanson populaire française dans le temps et l’espace,” 611–13.

century lament based on a Burgundian folktale. But a relationship is much easier to establish for a large number of nineteenth-century regional variants of the story of Renaud (a lament about a nobleman who returns home mortally wounded from battle). For example, a version of “Jean Renaud” recorded in the north of France (near Boulogne-sur-Mer) seems to be plausibly a variant of the protomelodic type, even as it transposes the tune into a major mode and a duple meter (ex. 4.22a)

A version found sung by the Basques in the southwest keeps the melody in a minor key and eliminates the flattened seventh altogether (ex. 4.22b). Traveling farther southeast to the Alpes-Maritimes, another version of the song brings us back to a major mode but reinvokes the modal (Mixolydian) quality of the first version we heard (ex. 4.22c). Yet another version from Bresse retains the basic melody type but set in a duple meter and with entirely new lyrics (ex. 4.22d). Other variants, however, seem far enough removed that Tiersot considers them mere *debris* or *ruins* of the original melody even though there may be enough overlap to consider them as distant relatives to the “Renaud family.”<sup>63</sup>

All these variants of a song type demonstrate how mutable the popular song can be when subjected to oral transmission.<sup>64</sup> Like the group of street cries that Kastner observed for potato sellers that all seem to be riffs on the same melodic cell, these song variants could be recognized as congenial members of the same family.<sup>65</sup>

Obviously, it's not that listeners before Tiersot hadn't realized that folk songs could have multiple versions by transforming themselves over time through oral transmission. Already in 1839, Villemarqué was noting that there could be a half dozen differing versions of the same tune to be found within a twenty-mile radius. But for him, that meant then determining which one was the oldest and most authentic—a problem he solved by always selecting the most elaborate and detailed version he heard.<sup>66</sup> For Tiersot, though, variety in song was not something to be conquered but to be celebrated. He marveled how a song could mutate as it migrates from province to province and evolve into ever-new configurations over the centuries, one whose character seems to adapt to its new environment.

Sometimes a melody, without submitting to any fundamental modification, can in passing from one country to another take on a wholly new character that is the character appropriate to a region where it has chosen its new home. It is this phenomenon of musical acclimatization that is most worthy of note. The people are by instinct great symphonists; they transform a theme, exposing each of its most diverse aspects by modifying its character and accent, just as a Beethoven did or a Wagner in developing the most sophisticated symphony or the most expressive musical drama.<sup>67</sup>

The melody and its lyrics continually give birth to countless numbers of variants and hybrids. The popular melody, he concluded, "is essentially a fluid, malleable, infinitely delicate thing and susceptible to transformation by the most diverse influences" (Tiersot, 163). The vexing question of identifying the "authentic" version of a song then becomes something of a moot point, since the nature of popular song, according to Tiersot, seems to be that of perpetual "transformation" and "metamorphosis" (147).

Migration, metamorphosis, variation, mutation, adaptation, and acclimatization. It sounds more like a discussion about Darwin's theory of natural selection than about popular song. And this is actually not too far from the truth. As we have seen scattered through many of the quotes above, Tiersot did seem to treat songs at times as living things that take on a life and evolutionary development of their own.<sup>68</sup> (It may not have been just a happy turn

of phrase when the French writer Romain Rolland call Tiersot the “indefatigable botanist of the *chanson populaire*.”<sup>69</sup>) Of course, songs do not really migrate and divide protozoa-like in perpetual reproduction on their own. Any change in a song was brought about by human agency.

But that is precisely the point. As songs are transmitted orally to differing provinces, nations, and people, they seemed to take on the character of the native singers who adopt them within the new cultural and linguistic ecology. As we watch a tune such as “Jean Renaud” move around various French provinces, we see how the melody and rhythm subtly change by adapting to the inflections and accents of the local language or patois of its singers. For a number of observers, the song variants could take on the character of a whole race of people. D’Ortigue was emphatic about this point:

As for the songs and popular melodies [of the folk], there are as many kinds, varieties, and families as there are races of men, tribes, and clans. It is in these melodies, true historical monuments constituted only by oral tradition, that the civilization, memories, and histories of races that have sometimes been lost or disappeared may be perpetuated. And I do not hesitate to say that to the extent that these melodies are collected with the utmost care, the more we can know or establish about their primitive form and thereby reveal the laws of their tonality and the constitution of the scales on which they rest; it will shine the light needed to situate and classify certain national origins, whose obscurity is often quite difficult to penetrate.<sup>70</sup>

Bourgault-Ducourdray would surely have concurred with d’Ortigue. He, too, thought a folk song reflects the “true character of a race,” its melodies being of “pure blood.”<sup>71</sup> It is no wonder that debates surrounding the *chanson populaire* in France were often dragged into disputes about national identity and race. In a brilliant essay, the American musicologist Jann Pasler has compellingly shown how entangled the study of the *chanson populaire* had become with questions of nationalism, colonialism, and race during the Third Republic.<sup>72</sup> She points out how both Republicans and Royalists laid claim to the *chanson populaire* to promote their contrasting notions of French citizenship and ethnicity; it provided “a context for discovering similarities within the country as well as rationalizing or dismissing differences” (Pasler, 150). We will return to some of these questions for further scrutiny in the next chapter.

For now, we might note that the *chanson populaire* seems to challenge Fétis’s claim that we heard earlier, to wit, tonalities were monolithic and

immutable markers of a given race. We have seen ample evidence that folk songs in multiple tonalities could easily coexist. Moreover, they were constantly being mixed and exchanged in folk practice. Songs seem to move easily between old and new tonalities as they are passed around by singers—even within the same province.

But it was really not the scales and tonalities of European folk music on which Fétis rested his theory and thus by which it could be falsified; it was music outside of Europe—or more accurately, the exotic scales of the East—that seemed to cinch his case for knotting tonality together with race. If the examples of the *chanson populaire* that we have briefly sampled in this chapter do not seem to support his linking of tonality with ethnicity, examples of scale systems from the Middle East, South Asia, and East Asia proved far more convincingly in his view that tonality was something indigenous to a given people.

This is why the study of tonalities outside of Europe became such a critical topic in Fétis's scholarship. More than anything else, the evidence of varying scale and tonal systems from around the world confirmed to him the truth of his theory of tonality. But we will also see that Fétis was also able to bring in some of the most advanced and startling ethnological evidence of the time showing racial and linguistic filiations between the many ethnic groups of Europeans and those of the distant East. Fétis's musical research, we will see, provided some remarkable confirmations of this scholarship. But we are getting ahead of ourselves. Let us look at some of the first French encounters with exotic music from the East preceding Fétis. It turns out that the French long had pricked their ears to new sounds from outside of their borders.

## Orienteering Tonalities

On July 1, 1798, Napoleon Bonaparte successfully landed an expedition of some three hundred ships and thirty-six thousand troops in Alexandria. Under the dazzling leadership of the twenty-nine-year-old general, French forces were quickly able to take Cairo from the ragtag Mamluk defenders and begin a push farther south down the Nile River. At the same time, they soon undertook one of the most audacious lootings of cultural patrimony ever recorded. In the course of Napoleon's trek through the historic Nile Valley, his troops seized hundreds of artifacts and antiquities from this ancient civilization and packed them up for shipment to Paris. (It actually never happened, as the surrender of the French expedition in 1801 to Admiral Nelson meant that most of Napoleon's booty would now be headed to London.) No doubt the biggest blockbuster of the lot was the "Rosetta Stone," which enabled Champollion to finally crack the code of the hieroglyphic script some twenty years later.

The expedition was not simply one of military conquest and plunder, however, for Napoleon had also brought along some 167 scholars, scientists, and engineers as part of his expedition. Over the many months of their travels through the Nile valley, this small army of orientalists—they were called the "savants"—used their time to study, assess, survey, record, and map every aspect of Egyptian civilization, present and past. The results of this comprehensive enterprise would be eventually published in a monumental twenty-four-volume encyclopedia of Egyptian civilization.<sup>1</sup>

One of those savants taking part in this expedition seemed to be an unlikely participant. He was most recently a member of the Paris Opera chorus who possessed few scholarly credentials. This was Guillaume-André Villoteau (1759–1839). Yet Villoteau had long harbored interest in the Levant, having studied Hebrew at the Sorbonne briefly before the Revolution. In rec-



Figure 5.1. Engraving by M. Nargeot for the chanson "Souvenirs d'un vieux militaire." From the *Chants et chansons populaires de la France*, 2nd ser., n.p. Courtesy of the Newberry Library.

ognition of his dual interests, Villoteau was invited to join the savants as a specialist in Arabic music.

Villoteau had his own motives for taking part in the adventure. During his years as a singer and student in Paris, he had developed a keen fascination with ancient Greek music. Like many before him, Villoteau wondered just what it was about this music that could have produced the marvelous affects so often reported by earlier writers. He harbored a suspicion that perhaps the sounds he might hear in Cairo would echo the earliest music of Egyptian civilization—and best of all, ancient Greek music, which he was certain must have been closely related. By carefully listening to the music in present-day Egypt, then, he would have a sonic time capsule to the past and, if he were fortunate, perhaps discover some of those features of ancient Greek music that had purportedly given it such legendary affective power. It was a dream that had long seduced many Western musicians.<sup>2</sup>

But little could our opera singer from Paris have anticipated what lay before him. As soon as Villoteau disembarked in Cairo and began to wander its streets, he discovered a diversity of music beyond his imagination. There were, to be sure, the contemporary Arab musicians: the instrumentalists of the streets and cafes, the muezzins calling from the minarets, and the imams reciting the Qur'an inside the Mosques. But there were also a multitude of other minority ethnic groups who had migrated to Cairo and brought their own musical traditions with them: Abyssinians and Sudanese, Dongolesse and Berbers, Senegalese, Christian Copts, Armenians, Syrians, Persians, Orthodox Greeks, Turks, and Sephardic Jews. It was a veritable aviary of musical sounds to be heard.



Our amateur savant carried out his research with remarkable discipline, listening carefully to the many musical styles he discovered, querying musicians about what they could say about the music, and attempting wherever possible to notate these differing musical practices. After some three years of fieldwork, Villoteau returned to Paris armed with a trove of raw material for analysis: hundreds of transcriptions of music, notes from his many conversations and observations, copies of Arabic treatises on music, and even a few indigenous musical instruments. Villoteau spent the next decade working on his report while continuing his research in Parisian libraries and consulting with linguists for help in nuances of translation. The resulting text ended up being far more ambitious than he surely had planned, constituting (in the second edition) some one thousand printed pages of text, translations, and transcriptions. His contributions were in two basic parts: (1) the present-day state of music in Egypt and a description of its musical instruments, and (2) the music and instruments of Egyptian antiquity.<sup>3</sup> For all its many deficiencies, Villoteau's study still represents an invaluable eyewitness account of the music of the Nile valley at the dawn of European colonialism.<sup>4</sup>

Of course Villoteau was hardly the first Westerner to visit the East and take note of the unsettling music to be heard there. Throughout the seventeenth and eighteenth centuries, Jesuit missionaries and fleets of European explorers had sent back numerous reports of exotic music from around the globe: the Levant, India, China, the Americas, Africa, and the South Pacific islands.<sup>5</sup> And while the reliability of these reports varied widely, together they pointed to an astounding world of music making completely new to Western ears. Still, Villoteau's study was unprecedented in scope and scholarly detail. Never before had a Westerner collected and analyzed so much firsthand information about a foreign musical culture with such care. Many scholars today cite it as the first great publication of ethnomusicological research.<sup>6</sup>

One of the first things that Villoteau discovered was that few of the melodies and rhythms he heard through his wanderings in Cairo could be easily notated—let alone theorized—using Western models. Especially tricky were the smaller intervals that seemed to be such a hallmark of this music. But the rhythms, too, seemed to elude the rationalized quantification of Western meter. Fortunately, there was a substantial corpus of classical theory on Arab music that he could turn to in order to help make sense of the strange microtonal singing he heard during his stay in Cairo.<sup>7</sup> After considerable study of these manuscripts, Villoteau tried to summarize the various Arab scale systems as well as the modes (or *maqāmat*) in which they are employed.<sup>8</sup>

Example 5.1. Arabic scale composed of third ( $\frac{1}{3}$ ) tones and semitones, from Villoteau, *Description de l'Égypte*, 14:43.

It turned out that some of these theorists divided the octave into a series of third ( $\frac{1}{3}$ ) tones along with two diatonic semitones, thus making for an eighteen-note scale. Example 5.1 shows the Arabic notation for these third tones and the accidental signs Villoteau used in order to indicate them on a musical staff.<sup>9</sup> Villoteau employed the sign  $\times$  to indicate raising the note by a third of a tone, while the double  $\times$  ( $\times$ ) designates a note raised by two-thirds of a tone.

According to the sources he studied, Arab musicians would begin (as did the Greeks) with a tetrachord and divide it using various orderings of these third tones.<sup>10</sup> In turn, these tetrachords could be systematically combined in heptatonic rotations ("circulations") and transpositions (*tabaqah*) to create the modes (or *maqāmat*) used in classical Arab music. Villoteau did his best to make sense of this complex system, but he obviously found it frustrating. For one thing, he complained, the Arab authors whom he read tended to use imprecise and overly poetic language in their texts, making their theory of modes infuriatingly opaque. And many of them failed to say a single word about questions of tuning.

What exasperated Villoteau more than anything else, however, was the complete lack of corroboration of this classical theory with any practice that he heard on the streets. When he attempted to press native musicians about their performance, he was shocked to discover their complete ignorance of any theory (*Description de l'Égypte*, 14:7, 113 ff.) The music they played or

MODE NAOUA.

*Mesure douyek.*

mah - bou - by là - bas bour

ney - tah Ou dek-ke - thou o'q -

- dah ou chneyt - tah Ta - leb - tou

ouas - lhou qâl ly' sbey -

tah<sup>2</sup> Mà - hlâ ka - là - mhon bi-t -

Example 5.2. Melody transcribed by Villoteau in the *Naoua* mode.  
*Description de l'Égypte*, 14:155.

sang seemed disappointingly unsystematic and capricious. While there were certainly microtones to be heard in their vocal cantillations and string playing, it was not always clear just what system—if any—the musicians might have been following in organizing these tones. Matters were not helped by the persistent habit of singers to embroider their melodies with the most ornate embellishments, virtually burying the melodic line and making any transcription almost impossible. In example 5.2, we see one example of a melody sung in the *Naoua* mode in which Villoteau tried valiantly to capture some of this ornamentation. He complained that “all the notes are so overloaded with ornamentation that each phrase of music becomes a roudade, and a simple melody is shrouded to the point of becoming insensible.”<sup>11</sup>

Villoteau was also deeply distressed by the sound of this music, which struck him as repugnant. Far from possessing the magical affects that were purportedly common to ancient Greek music, it possessed

the revolting effect of a music that tortures the ears with modulations that are forced, hard and baroque, ornaments of extravagant and barbarous taste, and all executed by the most graceless voices full of nasal timbres and insecure tone, while accompanied by instruments sounding either thin and dull or bitter and piercing.<sup>12</sup>

In one particularly memorable episode recorded in his report, Villoteau describes his reactions to some singing he heard in a local Coptic church. Villoteau found the incantation of the cantor to be interminably long, inducing alternately mind-numbing boredom and throbbing headaches. But wishing to be as sympathetic an observer as possible, Villoteau felt that such a harsh judgment was surely premature; perhaps his reaction was simply caused by the fatigue of having to stand throughout the whole service. He thus invited the Coptic cantor back to his residence to undertake a more objective analysis of his singing. (This must surely be one of the earliest examples of a controlled experiment in the annals of ethnomusicology.) Sitting now comfortably at a table with pen and paper in hand, he invited his guest to chant an Alleluia. Alas, the results did nothing to change Villoteau's initial negative reaction. The singing "lacerated our ears," he reported. "It spread over all our senses a kind of poison that nauseated our hearts and irritated our souls to an intolerable point" (*Description de l'Égypte*, 14:302). It was all he could do to sit through some of the other ten modes that the Coptic singer proposed to perform for his Western visitor.

As rebarbative as Villoteau found the musical scene in Cairo to be, however, not all of his experiences were so discouraging. The songs and dances of the Berbers, of which there was a small minority in Cairo, seemed to Villoteau to be charming and soothing, as if hearing music at its earliest age (*Description de l'Égypte*, 14:253). Even some of the Arabic songs, while harsh and unpleasant at first hearing, seemed to become less repellent after repeated exposure. Indeed, given time, some of this music became even mildly pleasant.

In the way that the taste of certain beverages disgusts us the first few times that we drink them, but yet become less unpleasant the more we become accustomed to them, and even, once we are finally completely

habituated to them, sometimes taste delicious to us, this is how it was that a prolonged exposure to Arabic music had been able to diminish or dissipate entirely our repugnance for its melody.<sup>13</sup>

But aesthetic pleasure was never the point of Villoteau's study. He had come hoping to find evidence that the music of the Arabs was related to older musical practices and that by studying it, one might get a sense of what ancient Greek music sounded like. It seemed a plausible assumption. After all, there was irrefutable historical and archeological evidence that Greek culture had once been a dominant influence throughout the Maghreb and Nile valley during the Ptolemaic dynasty. Wouldn't it be possible that reverberations of this ancient practice could yet be heard today in the music of the modern-day Egyptians?

Confirmation for this filiation seemed to be found in the classical music theory of the Arabs. Writers such as Al-Fārābī and many of his fellow theorists from the ninth and tenth centuries reported profusely on Greek music theory. This literature, Villoteau surmised, represented the most accurate summation of ancient Greek music theory we had: its tetrachordal basis, the use of various kinds of enharmonic intervals, and its system of scales and modes. If the complex elaborations, rotations, and transpositions of Arabic modes seemed far more convoluted and multitudinous than the Greek modal system, they both seemed to rely on systems of circulating transpositions.<sup>14</sup> (Both tonal systems also seemed to be built on the common note A.) And then there were the musical instruments. An "Ethiopian lyre" called a *kissar* that Villoteau heard Abyssinian musicians playing seemed to be closely related to a lyre described by Homer, with its five strings tuned in perfect fourths.<sup>15</sup> Similarly, a "pastoral flute" called an *arghul* (really a kind of double-reed pipe) matches descriptions we have of some ancient Greek reed instruments (*Description de l'Égypte*, 13:456–65). The same was true for a battery of wind and percussion instruments, all of which seemed to have a lineage to ancient Greece and perhaps even further back to the most distant Asian civilizations.

Whether or not one accepted Villoteau's linking of ancient Greek music and Arabic music (and we will soon see that this question divided scholars throughout the nineteenth century<sup>16</sup>), there was little doubt that he had found compelling evidence that there was as great a diversity of musical systems and "accents" as there were peoples and languages within the musical bazaar that was the Cairo streets.<sup>17</sup> Many of these systems seemed to be based on differing scales, and each seemed to point enticingly to more ancient prac-

tices. Of course Villoteau did not yet have the term *tonality* to describe these various scales and accents (though one imagines he would have welcomed it were it available). But if he was not yet ready to draw conclusions from this diversity, at least one scholar who studied Villoteau's report with growing excitement was eager to do so.

### FÉTIS AND THE PLURALITY OF TONALITIES

With the possible exception of Choron, there was no author who was a greater catalyst for Fétis and his theory of tonality than Villoteau. Far more convincingly than any other scholarship of his time, Villoteau's study demonstrated to Fétis how various non-Western musical cultures use scale systems radically differing from our own. This meant, in other words, that they each possessed their own special tonality. It was no wonder that Fétis would repeatedly return to Villoteau's study in his later writings.<sup>18</sup>

Fétis had always shown a keen interest in world music. Already in the first volumes of the *Revue musicale* there are occasional notices on non-Western music that indicate his fascination with musical practices outside of Europe. (One of the first books that Fétis reviewed in his newly founded journal was actually Villoteau's study.<sup>19</sup>) It is not a surprise, then, to find that the "Résumé philosophique de l'histoire de la musique" that prefaced the first volume of his *Biographie universelle* in 1835 begins with a substantial discussion of world music. Indeed, the topic takes up over half of the essay's 217 pages. Given that he believed his theory of tonality to be universally valid, it made sense that he would wish to test it against the evidence of world music. But we might more accurately say that it was because of the evidence of multiple scale types in various eastern musical practices that Fétis began to develop his grand theory of tonality in the first place.

Fétis had not even finished the second page of his *Résumé* when he came to his main point: across the world and throughout history, we can find a multitude of differing tonalities, each characterized by its own distinct scale, with its own intonations and accents.

But what is there in common between the music of the Greeks, that of the Hindus, the Chinese, the Arabs, the choral psalmody of the Middle Ages, the counterpoint of the masters from the sixteenth century, and the art of Beethoven, of Weber and of Rossini? Among all these people, in every epoch, art seems to have neither the same principle nor the same purpose. Even the order of sounds, which we call a scale, is constituted

by turns in twenty differing ways. The effect of each of these scales is to give the music a particular power and to produce impressions that are not possible with any other scale.

The specific makeup of each of these scales, Fétis deduced, would in turn determine (as well as delimit) the kind of music a given people would be able to create:

With one, harmony is not only possible but necessary; with another, though, it is only possible to have melody, and this melody can be of only a certain kind. One [scale] engenders only music that is calm and religious, while another gives birth to melodies that are expressive and passionate. One arranges the tones at equal distances and is thereby easy to perceive; in another, these distances are irrational and excessively close. Finally, one may be essentially monotonic, that is, in a single key, while in another, the passage or modulation from one key to another is easily established. (*Résumé*, xxxviii–xxxix)

A good illustration of such a foreign tonality, he tells us, is found in the system of Indian ragas. Some ancient writers claimed that there were as many as 960 differing varieties of these, though more recent scholars whom Fétis had consulted reduced this number to six primary ragas and thirty secondary ragas (*Résumé*, xliii). All these ragas, he observed, seem to be based on a basic seven-note scale that displays striking similarities to our diatonic (major) scale. Indeed, the musicians of India even had solfège names for these seven notes (*sa, ri, ga, ma, pa, dha, ni*) that bear resemblance to our own solfège system.

But in examining the theory behind this scale more closely, Fétis discovered that the intervals separating the notes do not correspond to any tuning system ever widely used in the West. In the Indian musical system, he noted, the octave is divided into smaller intervals (called *śrutis*) that each correspond roughly to a quarter tone. The scale divisions of the Indians contain steps of four, three, and two *śrutis* variously distributed depending on the particular raga, totaling twenty-two over the octave. So while a given raga may be modeled as a seven-note scale, no one should ever confuse any of them with a Western diatonic scale. Thus, Fétis finds it incredible that the eighteenth-century English scholar who first looked closely at this music, the great orientalist Sir William Jones, concluded that there was no appreciable difference between the tonality of the “Hindu modes” and that of European music.<sup>20</sup> Fétis reproduced “an Old Indian Air” transcribed by Jones “in

European notation" in his *Résumé* (ex. 5.3). But he had to correct Jones's notation by changing not only the rhythm but also the notes of the mode. Fétis finds he must omit the notes E and B in order to conform to the "true" gapped scale of the Hindola mode.<sup>21</sup> In addition he points out that the "third" note C# must be sung a quarter tone flatter. (Fétis laments the lack of any clearer staff notation that could represent the tuning of the Indian scale.) If there is any approximation to a European tonality to be heard in Indian music today, Fétis adds, then it must be because of the gradual infiltration of practices from the Persians and later from European visitors, which have slowly eroded these microtonal nuances.

Or consider Fétis's thoughts on the music of the Chinese. In many ways, Fétis notes, their tonal system looks a good deal like ours in the West, based as it is on a twelve-note division of the octave. Furthermore, as Amiot and Du Halde had pointed out in the previous century, the Chinese select from these twelve notes (called *lǚ*) a seven-note scale that corresponds to our diatonic scale, with five whole tones and two semitones. But this is where the correspondence ends. Fétis observed that although the semitones of the Chinese diatonic scale (given the special names *piens*) may seem to be just those appellative half steps used in Western tonality, they lack any real sense of attractive energy. In practice, Chinese musicians could easily omit them, leaving a five-note anhemitonic pentatonic scale that corresponds to the Western solfège notes of *fa*, *sol*, *la*, *ut*, and *re* (*Résumé*, lvi). Both possibilities are shown in example 5.4, where Fétis reproduces two differing Chinese tunes drawn from Amiot's notes, one air that seems purely diatonic (albeit with a Mixolydian flavor and some very angular jumps in the melody), and a second popular song called "Tsin Fa" that is purely pentatonic. (This latter tune—also known as "Mo Li Hua" or the "Jasmine Blossom"—was famously used by Puccini in his opera, *Turandot*.)

But whether using five or seven notes, Chinese music produced a "dull," "monotonous," and "insipid" affect that Fétis believed reflected the character of its people (*Résumé*, lix). By way of comparison, Hindu music, with its quarter tones, produced music whose accents were more "languorous, tender, soft, effeminate" than Chinese music (*Résumé*, liii). No better proof could be offered that musical tonalities reflect—and no doubt are selected because they conform to—the temperament of a given people. (And we should not forget that Fétis almost certainly had not heard a single note of any of this music when he was writing these confident descriptions.)

So what of the music of the Arabs? This was music that always seemed to be of the greatest interest among French writers of the nineteenth century. (Aside from Napoleon's expedition, we should note that the French



P. 1.

**AIR HINDOU,**  
traduit par W. Jones,  
en notation européenne.

1.

Lali'tala-vongola tapersi silana comalamalayasa mi re  
madhucaranicaraca rambita cocita cajita conjacu ti re  
viharati heririha sava sava sante nrityati yavatija  
nenasamamsachi virahija nasjada ran te

Le même dans le véritable mode hindou de l'original.  
(N.B. Dans ce mode, la troisième note tient le milieu entre ut<sub>2</sub> et ut<sub>3</sub> ♯)

2. Lento

Lali'tala-vongola tapersi silana  
comalamalayasa mi re madhucaranicaraca  
rambita cocita cajita conjacu ti re  
viharati heririha sava sava sante  
nrityati yavatija nenasamamsachi  
virahija nasjada ran te

Example 5.3. Two transcriptions of the same Indian melody, the first “in European notation” by William Jones, and the second by Fétis “in the true Hindou mode of the original,” in which “the third note falls between C<sub>1</sub> and C<sub>1</sub>♯.” *Résumé*, plate 4.

were the earliest colonizers of Arab lands, occupying the Algerian Maghreb already in 1830.) And there was also the prospect first suggested by Villoteau that Arabic music was the closest living practice that could be traced back to Ancient Greece. But Fétis doubted Villoteau’s thesis. The evidence relating Greek musical practice with modern Arabic music, he believed, was



not to be found in ancient Greece but in something even further back: ancient Egyptian music. Villoteau, we recall, had entertained just this possibility, but he thought there simply was not enough evidence to reconstruct what this music sounded like. In any case, Villoteau was too closely wed to the idea that Arabic music had its roots in Greek practice and theory. How would it ever be possible for Fétis to prove that it was actually ancient Egyptian music that was the fount of present-day Arabic music? How would we ever be able to reconstruct a dead musical practice dating back some four thousand years and demonstrate its filiations to the present? Fétis thought he had a good idea where to begin.

The idea was to look at the musical instruments that were played. Vivid depictions of musical instruments and their performers could be found in paintings that had survived on the walls of temples, tomb paintings, and amphorae. (Engravings of many of these can be found in the sumptuous plates of the *Description de l'Égypte* in which Villoteau first published his studies.)<sup>23</sup> Fétis thought that the instruments seen in some of these depictions had clear filiations to some instruments found in contemporary Semitic practices. In particular, a few of the string instruments held uncanny resemblance to those played today by Arabic musicians (*Résumé*, lxxv). The *tanbour* was such an instrument. With its multiple strings and long neck, the *tanbour* allows for an unusually wide range of notes along with an almost endless number of microtonal inflections. No such instrument existed among the ancient Greeks and Romans, no doubt as their own tonalities had no need for such a scale. But such an instrument did seem to exist in the long-necked and unfretted string instruments that are depicted in so much ancient Egyptian pottery and wall frescos (see fig. 5.2). Might this not prove that some of the Semitic tonalities also have such a deep pedigree?

The idea that musical tonalities could survive, even partially, over so many millennia was not entirely far fetched. Fétis noted that scholars had identified elements of the Coptic language that seemed to have had roots in the indigenous language of the ancient Egyptians (*Résumé*, lxxviii). So if parts of a language could survive over such a long period, why could not some musical traditions? The music of most "races semitiques," with their incessantly ornamented cantillations and use of smaller intervals, might well be a distant reverberation of ancient Egyptian tonality.

Another argument Fétis proposed for relating ancient Egyptian music to contemporary oriental musical practices was the notation of Byzantine music that was credited to the eighth-century Eastern Christian theologian John of Damascus. What struck Fétis so forcefully was that the notational signs for this Eastern chant used many of the same characters of Demotic



Fig. 81.



Fig. 82.

Figure 5.2. Drawing of two “Egyptian guitars” having long, unfretted necks. *HGM* 1:270.

script common in ancient Egypt (*Résumé*, lxx). With no other supporting evidence than the similarities in shapes that he noted, Fétis concluded that John of Damascus could in no way have been the inventor of this notation, as it seemed to reproduce signs that could be traced back many thousands of years earlier to ancient Egypt. The consequence of this insight was profound. Not only did Fétis believe that he had discovered what he was certain was a direct offspring of the original musical notation of the ancient Egyptians, he now could tell us exactly what their music sounded like. With its rapid movements and lush ornamentation, the songs chanted in the Byzantine church as well as the music of several of the other eastern peoples can “give us an exact idea of the ancient music of Egypt.” Fétis triumphantly concluded:

In the singing of their sacred chant, the Greek priests, Copts, Ethiopians, Armenians, and Jews rapidly traverse an extended range of sounds; this [style] is consistent with the depiction of those musical instruments that one may find on the monuments of ancient Egypt. All the music of Africa and a part of Asia thus trace their origins to this antiquity and preserve its character. (*Résumé*, lxxiii)

But the influence did not stop there. Fétis found that Arabic singing practices had an important influence on the West. One of his claims—as we saw in the previous chapter—was that the highly ornamented singing of the Arabs seemed to have seeped into Western liturgical chant and the music of the earliest minstrels after it was brought back to Europe by returning

crusaders who had been seduced by its alluring sounds during their time in Palestine and Syria. Elsewhere he speculated that the troubadours of southern France may have picked up much the same kind of music through their contact with Arab musicians active in Islamic Andalusia. If the influence was not long lasting (much of the most excessive melismatic singing in chant was curbed by the Cistercian reforms of the twelfth century), there was still a legacy in some of the instruments Arabic music bequeathed to the West, above all, the lute (oud).

And what of the music of Ancient Greece to which Villoteau had attempted to relate Arabic music? In Fétis's view, the tonality of classical Greek music was of a new kind. It was first of all surprisingly meager in its resources. The earliest myths of Greek music reported that only four notes were initially used by players, based on the number of strings on the kithara. Terpander was said to have increased the number of notes to seven, while some three centuries later, Timotheus of Miletus increased this to eleven (*Résumé*, xciv). Whatever the number, it was never a question of a singer using a wide range of notes or embellishing those tones with excessive ornamentation, as the emphasis was always on the clearest poetic declamation. For the most part, this meant the music stayed within a limited range (usually not exceeding a single tetrachord), was largely diatonic, and closely followed the poetic meter of whatever text was being sung. Above all, the music remained strictly melodic (*Résumé*, lxxxv, cxiii). (We will see later in this chapter how adamantly Fétis argued against those scholars who claimed that the Greeks might have employed any kind of counterpoint or harmonic accompaniment in their singing.)

Fétis did concede that the Greeks produced an inordinate amount of music theory that seemed to offer tantalizing testimony about the sounds of Greek music. Yet all of this literature may not give us a true picture of the actual music played. It was, after all, *theoretical* (*Résumé*, lxxxviii). For example, despite being mentioned by many theorists, the enharmonic genre did not seem to have been widely used by singers as far as Fétis could see (*Résumé*, cviii). For all the incredible affects that Greek music supposedly had on its listeners, Fétis could not locate any possible cause in the scales of its various modes. (He suggested elsewhere that the differing affects each mode supposedly had might have been due to the differing poetic feet used in certain poetic genres that were often associated with a particular mode [*Résumé*, cxix–cxx].) But the bottom line was clear. The origins of Greek music lay elsewhere than Egypt, perhaps somewhere farther east.

With his brief exposé of ancient Greek music finished, Fétis then turned in his *Résumé* to outline the development of music in the West, beginning

with the medieval period and moving briskly through the centuries until his own day. We have already heard part of this story in chapter 3. But now we can see how the whole story starts to fit together.

Fétis had gathered enough evidence to realize that the world was—and is—full of multiple tonalities, each one appropriate to the needs and character of the people who adopt it. This realization not only helped Fétis explain the present diversity of the world's music but also its transformations from earliest times to the present. While he was only able to offer a rapid and incomplete sketch of this astounding story in his *Résumé*, it was enough, he modestly thought, to prove his essential thesis about the dominating role of tonality in the history of music. And it clearly gave him an agenda for much future research.<sup>24</sup> As he wrote in the preface without apparently the least bit of blushing,

I have had the honor of discovering not only the eternal basis of the music of our day but of all possible music. Alone, I have come to understand the laws of all systems of music that little by little have shaped the various directions of art. The points of contact between these systems, the causes of their differences as well as their successive transformations, the necessity of a certain order in the way these transformations take place, all this became clear to me by considering them from the proper point of view. The merits and the deficiencies of all theories and of all methods were revealed to me; the history of all the revolutions in music seemed to me to be but the necessary result of some fecund principles acting ceaselessly without the awareness of those who were commanded. (*Résumé*, xxix)

These were boastful claims, to be sure, and he was fearless in promoting them. But it was inevitable that others would question some of his precarious evidence and overconfident deductions. It did not take long.

### KIESEWETTER, AGAIN

One of the first writers to respond to Fétis's "philosophical history" of music was his old nemesis, Raphael Georg Kiesewetter. Having already crossed swords several years earlier in the essay competition concerning the role of composers from the Low Countries in the history of Western music (see chap. 3), there was already a good deal of bad blood between them. Kiesewetter had in the meantime published his own short history of Western music the year before Fétis's *Résumé* appeared, and this no doubt was another irritant and perhaps catalyst for Fétis to get his text in print.<sup>25</sup>

Thus, with the appearance of the *Résumé* in 1835 outlining Fétis's philosophy of music history, Kiesewetter was ready to strike back. In a series of three essays on "The Music of the Later Greeks" that he published in 1838, he took the opportunity to deconstruct some of Fétis's most dramatic arguments contained in the *Résumé*.<sup>26</sup> The fact that the main focus of these essays was on Byzantine music (the "later" Greeks) should not disguise the fact that a good deal of Kiesewetter's concern also encompassed older Greek and Egyptian musical practices. For example, Kiesewetter seized on Fétis's claim that he had discovered the "missing link" between ancient Egyptian music and present day Eastern Orthodox music in the "Demotic" notation supposedly created by John of Damascus in the eighth century. But a careful examination of the musical notations used in the Eastern Church, he points out, reveals no connection whatsoever to the extinct script of the ancient Egyptians.<sup>27</sup> All of the claims Fétis made regarding filiations between ancient Egyptian and "later Greek" musical practice were fictional. It turns out, on the contrary, that the music—and notation—of the present-day Eastern Church was entirely of medieval origin (Kiesewetter, 6).<sup>28</sup>

And there was more. Simply because some Egyptian "guitars" and "tanbours" had unfretted necks, one could not thereby conclude that its practitioners would use microtonal intervals such as those Fétis claimed they would. Given that most of these instruments probably served as accompaniment to singers, it would be much more logical to conclude that their music was largely diatonic. Certainly, Kiesewetter insisted, the many harps depicted in Egyptian drawings would have been tuned diatonically (50–53). Thus, the third tones of the Arabs, on which Fétis placed such weight in his theory of multiple tonalities, might not have played quite the role he claimed for them. While Kiesewetter acknowledged that some later Arabic theorists did indeed calculate these smaller intervals, it hardly followed, he continued, that they were prevalent in practice. Reciting much the same argument Fétis had used to diminish the importance of the enharmonic genre in Greek musical practice despite its presence as a subject in the theoretical literature, Kiesewetter believed the music of the Arabs—like that of the Egyptians—to be largely diatonic despite what a few theorists had written about third tones.<sup>29</sup>

This was a point Kiesewetter returned to eight years later in his own treatise on Arabic music.<sup>30</sup> In greater detail than Fétis had been able to provide in his *Résumé*, Kiesewetter offered a comprehensive study of Arabic music using both ancient theoretical sources as well as contemporary evidence. He drew, of course, heavily on Villoteau's study even while recognizing its weaknesses. Kiesewetter could also draw on Edward Lane's expansive study of

contemporary Arabic culture (a small section of which was devoted to music) that had come out in 1836.<sup>31</sup> Most significantly, though, Kiesewetter had the advantage of collaborating with a specialist in Arabic language and history, an Austrian orientalist named Joseph von Hammer-Purgstall.

Fétis never had the benefit of such a collaborator, and from what we know of his personality, it seems doubtful that his ego would ever have tolerated one. Kiesewetter's collaboration with von Hammer-Purgstall shows what Fétis might have gained. Over the course of a three-year collaboration, von Hammer-Purgstall sat with Kiesewetter reading and translating music-theory manuscripts in Arabic, Persian, and Turkish. This invaluable education gave to his study a far better philological grounding than Fétis was ever able to manage. The result was a work that has been praised by one contemporary observer as "the most complete study of Arabic music throughout the nineteenth century . . . certain sections [of which] were not surpassed by more thorough studies until the mid-twentieth century."<sup>32</sup>

It was in this work that Kiesewetter tried to refute decisively Villoteau's old argument that Arabic music was closely related to Greek musical practice. While some medieval Arabic writers did indeed transmit the teachings of ancient Greek music theory (and these writings are the only sources we have for some of those Greek theorists), this hardly means that it had any link to current Arabic musical practice or theory, which seem to be completely independent creations.

The Arabic tonal system must have developed under the Arabic teachers of the previous era, and surely without influence from Greek teaching (which anyway would not have bestowed knowing approval on the system). We feel there is ample justification for designating the early appearance of this original and completely unique system as an Arabic creation. . . . Arabic writers ignore the most essential elements of early Greek theory, its tripartite tonal species, and its prized tetrachords; the Arabic tonal system is distinct from that of al-Farabi and the Greeks; the Arabic art of calculating tonal relations is quite different and entirely Arabic; the so-called keys of the Arabic writers are completely different from the art of the Greeks, as are the different octave species and modal transpositions.<sup>33</sup>

Once again, this shows the error of the historian relying too heavily on theoretical literature and assuming it reflects practice.<sup>34</sup>

So what of those third tones (*Dritteltöne*) that were supposedly such a hallmark of Arabic music? To be sure, he admitted, they were described in



some Arabic literature. In fact, Kiesewetter rehearses in pages of his book the calculations and measurements of these microtones based on various monochord divisions of Arab authors.<sup>35</sup> But none of this changes the fact that the modes of the Arabs—the various *Māqamāt* that musicians played—were essentially diatonic in nature, with microtonal inflections being more a by-product. In other words, Arabic musicians surely began with a scale of seven diatonic notes that they then slightly bent by ear in terms of intonation; they did not begin a priori with an octave division of seventeen notes from which varieties of seven-note scales were extracted. This is why Kiesewetter could claim that the “scale of the Arabs, in its simplest diatonic form, is the same as that on which all civilized people have built the system of their music.”<sup>36</sup>

Fétis, as we might expect, found this last argument preposterous. In a scathing review of Kiesewetter’s book, he voiced doubt that Kiesewetter had any sense of hearing if he believed the Arabic and Western scales sounded alike. (But need we remind ourselves that neither of our Western armchair ethnomusicologists had probably ever heard a single note of Arabic music at this time, writing from their comfortable offices in Vienna and Brussels.) His conclusion was damning: “All the criticism of M. Kiesewetter rests on an accumulation of errors, false suppositions, and of contradictions.”<sup>37</sup> And the roots of his misperceptions can be clearly attributed to his lack of any deeper philosophical understanding of music history:

Unfortunately the art of generalizing the results of observed facts is lacking in this distinguished scholar. He possesses erudition regarding the details of his theory of art and of his history. But he never perceives the philosophical laws within which these details may be subsumed.<sup>38</sup>

There was never a doubt, of course, just what Fétis believed those “philosophical laws” to be. They were the “constitutive principles of the diversity of tonalities” (*BU*<sup>2</sup>, 4:29). Only by virtue of his ignorance of these laws was it possible for Kiesewetter to believe that a seven-note diatonic scale was a common basis of all music. It is an error Fétis accuses Kiesewetter of committing again and again in his writings, whether he is speaking of medieval music, the music of the ancient Greeks, or contemporary Arabic music.<sup>39</sup>

One understands why Fétis was so incensed by Kiesewetter’s arguments, for he was sure that the existence—and priority—of a seventeen-note scalar division was the most critical element that differentiated Arabic tonality from the seven-note diatonic system found in the West. In suggesting that these third tones did not assume such a foundational position in Arabic musical practice, Kiesewetter was undermining one of the major pieces of

evidence for Fétis's theory of "the diversity of tonalities." But the firewall separating these two tonalities was being breached on the other side too.

Toward the end of his study, Kiesewetter noted that many Western instruments—such as guitars, zithers, and even specially tuned pianos—were capable of producing "Dritteltönen" (third tones) or other varieties of microtones. Many Western singers and string players also know how to inflect pitches that, when carefully measured, turn out to be third tones.<sup>40</sup> Could it be that varieties of microtones—the very hallmark of all Semitic and South Asian music in Fétis's history—had somehow been present all along in Western musical practice? Surprisingly enough, some evidence was found by several of his musicological contemporaries to suggest precisely that.

### QUARTER TONES IN THE WEST

As we have noted, Fétis did not accept that enharmonic intervals played a significant role in the practice of Greek musicians despite the fact that they were discussed and even calculated in some theory texts of musical harmonics. That was just his point: they were theoretical abstractions, not practical realities. From his extensive studies of Greek documents on music, he concluded that the enharmonic genre played a negligible role in the actual practice of Greek music. (As we noted above, these were ironically some of the same arguments Kiesewetter had made against Fétis's claims regarding the presence of microtones in Arabic music.) This was confirmed, he went on, by all that we know about Greek musical instruments, which precluded the use of such enharmonic tunings.<sup>41</sup> To be sure, there were some pretty myths about the creation of the enharmonic genre by Olympus. And goodness knows that some Greek canonists provided extensive calculations of the genre in their treatises. But none of this evidence could be used to reconstruct the practice of Greek music. And even if one were to grant some place for the enharmonic genre in Greek music, it certainly did not follow that such a practice was ever taken over in the West. Western chant singing, from all the earliest literature we have, has consistently been diatonic and lying fully in the *tonalité du plain-chant*.

It must have been disconcerting, then, for Fétis to hear claims by some scholars that there might well have been a tradition of microtonal singing in the early medieval church. The Abbé Raillard, one of the leading scholars who worked to decipher neumatic notation (Fétis's "Saxon" notation), thought that some neumes as early as those in the St. Gall manuscript might signify quarter tones.<sup>42</sup> In a more systematic study of the question, Alexandre-Joseph Vincent looked closely at the neumatic notations of the

Montpellier Antiphony (Mo 159) and identified a number of enigmatic markings that he was sure could only be interpreted as indicating microtonal inflections.<sup>43</sup> Vincent supported his argument by observing that these signs (which he termed *épisèmes*, after Nisard) are only found above semitones at cadence points, where singers might naturally raise the leading tone even higher in order to enhance the appellative pull to the tonic. This was surely what Marchetto must have meant, Vincent thought, when he wrote of sharpened notes being raised by a *diesis* at cadence points. Vincent did not doubt that this practice reflected a real tonal intuition of singers at the time, a remarkable “presage” of modern tonality.<sup>44</sup> Two professors named Frassel and Germain from the seminary in Bastogne agreed with Vincent that singers of chant in the Middle Ages also employed quarter tones, drawing their evidence from the notorious discussion of *subductio* found in Gerbert’s edition of the *Micrologus*.<sup>45</sup>

Fétis, though, would have none of this. In an extensive review of the publication of Frassel and Germain prepared for the Belgian Royal Academy, he laid out a comprehensive case against their arguments favoring the use of quarter tones in medieval chant. To begin with, using both paleographic evidence and an internal analysis of the text, Fétis showed (again) that the passage in Gerbert’s edition of the *Micrologos* concerning *subductio* represented a much later interpolation.<sup>46</sup> It hardly could have been written by Guido himself. But even if we wished to accept the passage as authentic, Fétis went on to argue, his compatriots misanalysed it, drawing unfounded deductions regarding the behavior and proper tuning of the resulting *dieses* described by pseudo-Guido.<sup>47</sup>

One might have thought that Fétis could have been more sympathetic to the argument of his fellow countrymen. After all, he had earlier suggested, as we have just seen, that the melismatic foliation that he believed to be a new feature of chant practice in the eleventh and twelfth centuries—and one he admittedly did not find much to his liking—was the direct result of Arabic influences brought back to Western Europe by returning crusaders and encounters of troubadours with Arabic singers. Why might not a similar practice of microtonal singing also have been imported?<sup>48</sup>

We should by now understand why Fétis would have wanted to keep such an influence sequestered. For quarter tones, or any other microtonal division of a whole tone, could not possibly have fit the *tonalité du plain-chant* within which this music was sung. It would have been one thing for singers to start embellishing their chants with florid ornaments. But it would have been quite something else to do so using small intervals that had no history or place in the reigning tonality.

Of course, it was just those slithering *dieses* that some listeners claimed could be heard in Western singing. George Kastner, as we may recall from the previous chapter, discovered that such small intervallic inflections were often to be heard in many of the street cries he recorded (ex. 4.2). And in a number of the more rustic *chansons populaires*, some listeners claimed to hear the use of quarter tones or some rough equivalent. For example, a certain Mme de la Villéhélio thought quarter tones to be such a common feature in Basque songs that she provided a special notational sign for them in an edition she published.<sup>49</sup> Not everyone was convinced, to be sure. In his study of the *chanson populaire*, Tiersot did not find any systematic use of microtones. At most one might hear occasional inflections of pitch, but the practice was never consistent. And it certainly did not constitute any intrinsic element of the song's tonality.<sup>50</sup>

If the ethnographic evidence for quarter tones in the West was disputed, there was no doubt that many composers found the idea of microtones intriguing. Since at least Vicentino in the mid-sixteenth century, many Western composers have been seduced by theories of Greek enharmonic music and tried to replicate these microtones in their own music.<sup>51</sup> A few French musicians in the mid-nineteenth century also became obsessed with calculating these microtones and even collaborated to build some experimental keyboards that could play quarter tones, among them—once again—Alexandre-Joseph Vincent (ex. 5.5).<sup>52</sup> Finally, a few composers also experimented with quarter tones in their own compositions, a much-discussed example being the invocation of the Greek enharmonic genre by Halévy in his oratorio *Prométhée enchaîné* (1849). Earlier, Anton Reicha suggested that quarter tones could be a resource for adventurous composers.<sup>53</sup> Yet despite all the chatter by scholars about singers and violinists bending their notes upward at the leading tone or composers resurrecting the ancient Greek enharmonic genre, no one was going to argue that the use of quarter tones or other such small intervals ever constituted a major or integral component of Western music. But if the desultory mixing of oriental microtones with Western music was never a serious threat to the validity of Fétis's theories, another example of hybridity proved distinctly more dangerous.

## HARMONY IN ANCIENT GREEK MUSIC

We will recall from chapter 3 that Fétis had thought ancient Greek music to be exclusively monophonic in nature. Indeed, when he wrote his *Résumé philosophique* in 1835, he believed that all music surrounding the Mediterranean remained purely melodic until the introduction of harmony by in-

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## MÉLODIE,

Sur les notes de la Gamme enharmonique, composée par M. Populus pour l'orgue à quarts de ton de M. Vincent(1).

The musical score is written on seven staves. The first staff shows a scale of notes with a fermata over the first note. The second staff is marked 'Andantino.' and begins with a 6/8 time signature. The subsequent staves contain the melody with various ornaments like slurs and accents, and a 'Nota.' section at the end.

Nota. Le signe ✓ indique que la note, qui en est affectée, est baissée d'un quart de ton.

(1) P. 67.

Example 5.5. Tune based on an enharmonic scale to be played on the enharmonic keyboard designed by Vincent. From Deloche, *Théorie de la Musique*, 101.

vading northern tribes in the fifth century of the modern era. And even then, it took musicians many centuries to develop a true sensibility to harmony and begin to incorporate it skillfully within their own musical art.

It was almost as important for Fétis to keep melody and harmony separated in his music history as it was for him not to mix differing scale systems. According to his theory, true harmony could only arise within the diatonic tonalities of Western music. The various intervals needed for advanced “prolongation” or “modulation” were not possible in any of the oriental tonalities. This was one of the reasons Fétis was so certain that ancient Greek music was monophonic in nature.

It was actually an old question in musicological literature. As far back as the sixteenth century, humanists such as Mei and Galilei were arguing that Greek music must have been purely monophonic in nature. With a bit more textual evidence, writers in the eighteenth century such as Burette, Padre Martini, Burney, Rousseau, La Borde, and Forkel continued to argue for the monophonic nature of Greek song even as the question of how the kithara might have accompanied singers raised a few doubts about this thesis.

By the nineteenth century, however, a growing faction of scholars began to argue for the use of multiple parts in Greek music. The great German philologist August Böckh, who edited an edition of Pindar's poetry between 1811 and 1821, was one of the first Western scholars to cite textual evidence from Plutarch in favor of a simple kind of harmony in Greek recitations. A bit later, our polymath Alexandre-Joseph Vincent took up the cause of simultaneous harmony in Greek musical practice.<sup>54</sup>

Vincent's evidence was varied. There were those suggestive remarks in texts by Plutarch as well as pseudo-Aristotle, Aristoxenus, and some other minor writers pointing to kithara players plucking or strumming several notes at once while accompanying musical recitations. There was iconic evidence wherein we find depictions of several Greek musicians apparently playing differing instruments in some kind of consort depicted on amphorae and funeral urns. Finally, there were some Greek harps, whose construction as described by ancient writers—and confirmed in surviving depictions—suggests the likelihood of plucking more than one note at a time. Through this accumulation of evidence, Vincent supposed that melodies would have been accompanied by instruments playing various combinations of perfect and imperfect consonances, and some with more elaborate figurations or solo interludes. While he realized none of this would have had much resemblance to harmony as practiced today in the West, it was a kind of multi-voiced *harmonia* nonetheless.

Vincent was not discrete about which scholar he was taking aim at with these arguments. It was his old combatant Fétis. And once again, Fétis was not slow to respond. If Vincent's evidence supporting the use of quarter tones in Western music was merely irksome to Fétis, the claim for harmonic practice in ancient Greek music was a frontal assault on one of his major theses concerning the evolution of Western music. It could have been no surprise to anyone, then, that Fétis issued a blistering rebuttal to Vincent in the form of a 120-page paper submitted to the Belgium Academy in 1858.<sup>55</sup> There Fétis offered faint praise for Vincent's many contributions to music scholarship over the years. But as Vincent was not a musician himself, Fétis

reminded his readers that Vincent's grasp of music was limited. His understanding comes "only through study and books," thus depriving him of the insight and sense regarding tonal systems and harmony available only to a musician (Fétis, 37). On page after page, Fétis tries systematically to demolish each piece of evidence Vincent put forward, reaffirming his conviction that the ancient Greeks knew only of monophonic music.<sup>56</sup> For all the stupendous achievements of ancient Greek culture, Fétis concluded that their cultivation of music was surprisingly impoverished, especially in comparison with the rich musical cultures of India, Assyria, and Egypt from the same period (111).

But the tide was turning against Fétis. By this point, a number of German scholars were beginning to study Greek writings on music with ever-greater philological sophistication. In addition to the study of Böckh already mentioned, there were studies by Fortlage, Franz, Wagener, Weitzman, and especially Westphal that together cast increasing doubt on Fétis's dogmatic position regarding the monophonic nature of Greek music. (Bellerman was one of the few Germans to take a contrary position.) On the French side, Vincent kept up his attacks on Fétis, while another major rebuttal was delivered by his younger adversary, François Gevaert.<sup>57</sup> In a detailed examination of all literary and theoretical evidence, Gevaert concluded that while Greek music was indeed monophonic *for the most part*, there was also no doubt that a simple kind of counterpoint was often used to accompany melodies. Indeed, Gevaert tried his hand at writing out a possible accompaniment of a kithara to a surviving melodic notation (Hymn to Helios), even while admitting that his attempt was purely speculative (Gevaert, 374–76).

It was not just the Greeks who seemed to know something of harmony. Evidence was also accumulating that many eastern musical traditions employed various degrees of vertical harmony. Already in the late eighteenth century, Captain Cook's expedition brought back startling earwitness accounts to English readers of South Pacific Islanders singing in harmony (thus undermining one of the central claims of European musical sophistication).<sup>58</sup>

But all of this was unknown to Fétis—or if any of it was known, it could hardly be confused with harmony as it developed in the West. True musical harmony, he insisted again and again, was only possible with the diatonic system in which imperfect consonances were accepted and thus allowed for the possibility of "prolongation" and ultimately "modulation." Remaining firm in the thesis he first laid out in his *Résumé* two decades earlier, Fétis reiterated that only with the ecclesiastical modality of the Middle Ages was there a fertile soil in which seeds of harmony could start to grow, though crucially this would need to await the insemination by northern tribes who

would introduce the first primitive practice of harmony as they descended southward.

But for the first time, Fétis also brought up some new evidence about ancient Greek music. Far from having remained static, Fétis concedes near the end of his essay, Greek music might actually have evolved over a long period of time in antiquity. And the evolution was not one toward harmony but toward diatonicism. For it seems that the very earliest stages of music on the Greek peninsula might have been quite different from those described by the classical theorists (and for that matter, described by Fétis is his *Résumé* of 1835). Instead of being sung within a stable system of diatonic modes, Fétis now wondered whether it was possible that Greek music might actually have been originally composed of a scale consisting of smaller intervals. Despite his earlier doubts, the ancient enharmonic genre reported by various theorists might indeed have been the aboriginal tonal language of this early music, one made up largely of quarter tones.

Fétis linked this enharmonic practice to the Pelasgians who populated the Aegean basin in the second millennium before the Christian era.<sup>59</sup> The Pelasgians, he points out, originated (“according to recent discoveries”) from central Asia, migrating from India through Persia and Assyria.<sup>60</sup> They must have brought with them, Fétis surmises, a kind of microtonal singing that can still be heard to this day in those regions. Over time, though, this practice died out as Greek tribes gradually attained dominance in the region. The Pelasgian tonality soon evolved into a simpler chromatic and then diatonic system that became codified in classical Greek theory. And it was this diatonic tonality, within which harmony would eventually germinate, that was bequeathed by the Greeks to Europe.

It was a provocative new thesis proposed by Fétis, one that would suggest that the earliest tonalities of Western music might have a distant kinship with music from Asia. But Fétis was not ready to lay out the details of this theory quite yet, asking his readers to await the publication of his *Histoire générale* where it would all be made clear.<sup>61</sup> It would be another eleven years until the first volume of this long-promised history finally appeared in print. And when it did, we can perhaps understand why the work took as long as it did.

#### THE *HISTOIRE GÉNÉRALE DE LA MUSIQUE* AND THE INDO-EUROPEAN ROOTS OF WESTERN TONALITY

Already in his *Résumé philosophique* from 1835, Fétis had promised his readers that he was working on a far more comprehensive “general history”



of music that was imminently forthcoming.<sup>62</sup> His study would record and analyze the entire panorama of world music from deepest antiquity to the present age, drawing on some of the most startling “recent discoveries” of contemporary scholars from a variety of disciplines. (To get an idea of its audacious ambition, we might note that at one point, his working title was a “*Histoire générale de la musique chez tous les peuples et dans tous les temps.*”<sup>63</sup>) Fétis’s model may well have been the work of François Guizot, whose *Histoire générale de la civilisation en Europe* from 1828 offered a sweeping overview of European history. But in the field of music, there was nothing comparable. In both its scope and its scholarly ambition, the *Histoire* would stand as Fétis’s crowning monument as a scholar.

Yet little could Fétis have foreseen how difficult it would be to bring his ambitious project to completion. Over the years, the scope of his *Histoire* obviously expanded far beyond his initial plans. Each year there seemed to be more and more of those “*découvertes récentes*” that he alluded to in his *Mémoire sur l’harmonie simultanée* that caused him to pause and retreat to his library for more reading and research and to rethink many of his original premises. It was not until 1869—fully thirty-four years after the publication of his *Résumé philosophique* and more than sixty years after he apparently conceived of the ambitious project—that the first volume of his promised history saw the light of day as *Histoire générale de la musique depuis les temps les plus anciens jusqu’à nos jours* (A general history of music from the most ancient times until our own days). Another four volumes followed over the next six years, although the last three of these were only issued posthumously thanks to the editorial intervention of Fétis’s son Édouard. (Fétis *père* had passed away in 1871 at the age of eighty-seven, just as the second volume was in press.<sup>64</sup>) And even then, the *Histoire* was incomplete, with three more planned volumes left unfinished at his death.<sup>65</sup>

But even in its incomplete state, the *Histoire générale* constitutes a remarkable monument of nineteenth-century scholarship. It is not just the sheer size of the publication that stands out (though at almost 2,500 pages, it was the longest history of music to be published in the century). What truly distinguished the *Histoire* was its ambitious attempt to integrate the history of music within a general ethnological history of the human race. For over the decades in which Fétis was writing his history of music, the study of ancient human history exploded as a field of scholarly inquiry with the disciplines of ethnology, archeology, biology, human anatomy, and geology all contributing to a new understanding of the earliest history of mankind. But there was perhaps no discipline that did more to contribute to this revolution than that of comparative linguistics (or “comparative philology” as it was

usually called). By studying and comparing the various languages of peoples from Europe and the Asian subcontinent with new tools of linguistic analysis, scholars in the nineteenth century were able to sketch out a remarkable new picture of the earliest periods of human history. As Fétis began to learn about some of this scholarship, he realized that it held implications of incalculable importance for his own theories of music history and tonality.

Thus, for the second time in his life, newly acquired knowledge forced Fétis to rethink many of his most basic assumptions about musical tonality. This time, though, there does not seem to have been any revelatory “flash of lightning” similar to the one he experienced while walking through the Bois de Boulogne in 1831. His knowledge of the young disciplines of comparative philology and ethnology was accumulated gradually, it seems, as he labored on his *Histoire*. We can well understand why working through this immense scientific literature would delay yet again the publication of his long-promised *Histoire*. But at some point, obviously, he began to see how this new scholarship could offer the scientific foundation he had been seeking for his history of music—and perforce, his history of tonality. The *Histoire générale de la musique* stands as one of the most thoroughgoing ethnological studies of music history ever written. Fétis believed he was drawing on—and even contributing to—the most respected scientific research of his day in his magnum opus. As the culmination of a lifetime’s work, it dared to draw an awe-inspiring tableau of musical tonalities unfolding over history according to the same laws that governed the origins and development of all human races and their respective languages in all their glorious multiplicity.

We can begin by mentioning a few of the first important milestones in this vast scholarship. In 1786, the British orientalist William Jones had famously noted an uncanny kinship between ancient Sanskrit and a number of contemporary European languages, and he speculated that there might be a subaltern genealogy to explain these similarities.<sup>66</sup> Several German scholars beginning with Rasmus Rask, Franz Bopp, Jacob Grimm, and August Pott picked up on this suggestion of Jones and began to explore the filiations between Sanskrit and branches of European languages in detail, discovering an increasing number of remarkable commonalities.<sup>67</sup> In short order, these investigations blossomed into a full-blown research program for an army of brilliant historical linguists across all of Europe in the first half of the nineteenth century. In France, these included Frédéric Eichhoff, Adolphe Pictet, and Eugène Burnouf, each of whom began systematically to analyze the vocabulary and grammar of Sanskrit and several other ancient Asian and Semitic languages and compare them to a range of Western languages.<sup>68</sup>

These philologists were able to confirm the hunch of Jones and begin to

sketch out a grand “Indo-European” family tree of languages that was rooted somewhere in central Asia. In the process, a new history of the European people began to emerge. It is a remarkable story. It starts with a race of pale-skinned Aryas living in the ancient Bactrian plains of central Asia countless millennia ago who first spoke an autochthonous language that was believed to be an early form of Sanskrit. Over time, this “white race” of Aryas (later to be dubbed the “Aryans”) moved eastward over the Himalayas into northern India, driving out (or mixing with, as the case may be) the native, dark-skinned Dravidians they encountered. Subsequent waves of these Aryas then moved westward, making their way over time through Persia, the Caucasus, Asia Minor, and eventually into all corners of Europe. Along the way, the Aryan people developed into a number of subgroups, often mixing with the native peoples they encountered in the course of their migrations. At the same time, their language splintered and evolved into a number of variants that eventually developed into the modern language families of Europe.

In reality the picture was not as clear cut as that. There were as many versions of this story as there were scholars telling it, with differing races, tribes, skin colors, languages, timescales, and migrational paths.<sup>69</sup> And every story had its gaps, as it was not possible to identify with any certainty the multitudes of races and ethnic groups from many millennia earlier, let alone to reconstruct their changing languages and map out their migrations accurately; there simply was not the archeological evidence available for such a large picture. Nonetheless, there was a general consensus that the roots of most European peoples and their languages could be traced over many thousands of years and over labyrinthine byways back to a central Asian homeland and an Indo-European *Ursprache* whose closest existing relative seems to be Sanskrit. It was a sensational discovery of contemporary scholarship. The establishment of the Indo-European language stemmata proved to be almost as revolutionary in the understanding of human development as Darwin’s theory of evolution.

Fétis must have recognized right away how suggestive this research was for his own work in music. Since his *Résumé* of 1835, he had become convinced that musical tonalities were a peculiar product of individual peoples and races no less than their languages. He also suspected that there may have been distant filiations between the musical systems of some of these disparate civilizations and races (recall his wondering about the relation of some Celtic and oriental music, p. 103). But lacking in all of this was clear evidence for the transmission of any language—musical or otherwise—over such vast spaces and times. It was one thing to trace the peregrinations of a given chanson through various provinces of France and over a few genera-

tions of singers. It was quite something else to track musical tonalities over whole continents and massive timescales. How could this be done?

This is where the work of the philologists proved so helpful. It had long been a founding axiom of historical linguistics that race and language were deeply related. That is to say, the language of a people was regarded as an organic reflection and expression of its race and nationhood. As Herder famously expressed it in 1783, "Has a people anything dearer than the speech of its fathers? In its speech resides its whole thought domain, its tradition, history, religion, and basis of life, all its heart and soul."<sup>70</sup> Fétis, we will recall, had said something quite similar about tonality (see p. 18). Each race of people, each civilization had a tonality that was a reflection of its character and needs. And given that he was certain "what is true of language is true of music" (*HGM*, 1:iii), it was simply a matter of following the lead of the comparative philologists by identifying the indigenous tonalities of these early humans and plotting out filiations of tonality between various ethnic groups over history. For if it was possible for language families to travel great distances over time, it should also be possible for musical tonalities to do the same, since the "systems" of the two "are analogous."

What Fétis essentially did, then, was to piggyback a lineage of musical tonalities on the Indo-European stemmata that his contemporaries were sketching out.<sup>71</sup> If central Asia was the cradle of an Aryan people who first entered northern India and later moved westward through Asia Minor and on into Europe, they must have brought with them musical tonalities along with language. Of course their tonalities did not remain static. Just as the languages of the various people that entered Europe would be changed over time, so, too, would their musical tonalities necessarily mutate and evolve. But just as often, these tonalities would retain vestiges of their older forms.

The story that Fétis narrates in the first volume of the *Histoire* thus shows both transformation and preservation. He is certain that the earlier of the proto-Indian tonalities contained the "small intervals" reflected in the seventeen- and twenty-two-note scales of present-day Arabs and Hindus. Perhaps the Aryans who entered north India had their own indigenous tonality of microtones, or perhaps they picked it up from the native Brahmins (*HGM*, 1:121). But clear evidence for the microtonal practice of this early music can be deduced from a number of sources. Above all, there are the many string instruments of the Arabs and Indians whose long unfretted necks would be ideal for the sounding of the minutest subdivisions of the whole tone (fig. 5.2). Fétis also reminds us that many of the oldest theoretical treatises we have from these civilizations describe microtonal practices that must have roots that go far deeper into the beginnings of their histories.

As the Aryans began to migrate westward, they divided into various subgroups whose precise peregrinations remain something of an “ethnological mystery.” But it seemed that one southern branch originating in Persia ended up crossing through Asia Minor into the Aegean basin, becoming the fabled Pelasgians, while a second branch of migrants moved into the Italian peninsula and became known as the Etruscans (*HGM*, 1:123–28). Fétis was confident that these early European settlers retained something of the microtonal singing of their central Asian roots. A bit of tantalizing evidence for this could be gleaned from some later myths retold by the Greeks that obliquely reference the practices of their ancestors; in this case, earlier tribes of Lydians and Phrygians supposedly practiced a kind of enharmonic singing, the discovery of which is attributed in Greek mythology to Olympus and which Fétis thought to be evidence of Pelasgian musical practice. No doubt, he now thought, this practice derived from the quarter tones imported by the Pelasgians from Persia. Meanwhile, more migrants from central Asia entered Europe farther north in a series of waves, over time becoming the fearsome tribes of northern Europe: the Celts, Saxons, Scythians, Lombards, and so on. Fétis thought that these ethnic groups, too, must have begun with a tonality of smaller intervals like that of their southern counterparts (*HGM*, 1:154–64).

But then something remarkable happened. In a process whose precise chronology will be forever unknown and can only be reconstructed “by induction,” the tonality of all these many migrants from the East began gradually to change, losing the microtones of their central-Asian roots and moving first to a chromatic and then a diatonic tonality made up of tones and semitones. On this point, Fétis believed he had found impeccable evidence in an ancient bamboo flute that had miraculously survived intact from one of the earliest Egyptian dynasties and which he had analyzed and reconstructed (*HGM*, 1:222 ff.).

Fétis’s reconstruction of this ancient Egyptian tonality is an interesting story that is worth recording here. It seems an old bamboo flute, evidently of ancient Egyptian provenance, had somehow found its way to a museum in Florence. While Fétis himself never set eyes on the instrument, he had heard reports of it, and he asked his friend, the Italian musicologist Basevi, to carefully measure the instrument so Fétis could have an exact reproduction built in Paris. After commissioning a precise reproduction of the flute based on the description of Basevi, Fétis was amazed to discover that the first seven notes sounded on the flute (successively stopping the holes with one’s fingers) produced an exact series of semitones (which is to say, perfect fifth filled in with semitones). By overblowing the flute, a performer could also produce an octave replication of the same chromatic notes, and with a little practice,

even a series of fifths above that (*HGM*, 1:224–25). The result was a flute that could produce the full twelve-note chromatic scale. Based on this evidence, Fétis was certain that the tonality of ancient Egyptians must have been chromatic—not the microtonal system of the earlier central-Asian races, but not the diatonic system of the later Greeks, either.

Perhaps the most dramatic case of tonal transformation is to be seen in the case of the Greeks, where the enharmonic genre that Fétis believed to be a legacy of Pelasgian practice eventually gave way to a chromatic and then largely diatonic practice that became the foundation of their classical tonal system (*HGM*, 1:133–35). What caused this transformation, one of “the greatest revolutions recorded in the history of music”? Fétis can only attribute this to a capacity of the Greeks to recognize and exploit the intonations of their scales for greater artistic development.

Ironic as it may seem, Fétis explained, it was the aboriginal microtonalities of the “race blanche” in its central-Asian incubator that first trained their ears to recognize and exploit the most subtle intonations of sound. “The white race,” he writes, “because of their more sensitive organs, found themselves from their beginnings capable of comprehending and comparing the relations of sounds spaced at intervals of excessively small size, and then even to increase the number of these sounds in their first scales” (*HGM*, 1:119). While most of the Aryan races and their offshoots eventually dropped these smaller intervals in favor of varieties of chromatic and diatonic intervals, their acute sensibility to their tonal resources gave them the capacity to develop their music in ways that were unimaginable to other races. It was also the reason that the appellative semitones in our modern tonality have such an affective quality to them, differing from any other interval in our scale system; they are vestiges of the smaller intervals that once filled their most ancient tonalities.

The capacity of the white races of Europe for “transformation and progress” is all the more remarkable when compared with the relative stasis we can see in the music of other races who retained their aboriginal tonalities and did not change over to a diatonic system, including the Hindus as well as most of the Semitic peoples: the Egyptians, Hebrews, Assyrians, Phoenicians, Chaldeans, and Arabs. The music of the Arabs today, Fétis was sure, with its seventeen-note scale and the highly ornamented cantillations of its singers, differed little from that heard three thousand years ago (*HGM*, 2:24 ff.). And even if some Semitic peoples had moved beyond microtonal tonalities (such as the Egyptians), none of them ever showed the genius of the Aryan people for true adaptation and transformation.

This was an idea of Fétis that might have been inspired by reading Émile

Burnouf, one of the most notoriously anti-Semitic philologists of the time who sharply distinguished Aryan and Semitic lineages of race and language (to the distinct disadvantage of the latter). Fétis may also have read something of Ernest Renan, the great philosopher and philologist of Semitic languages and a contemporary of Fétis. (Fétis had several books of both Burnouf and Renan in his library.) Renan had long been studying differences between the languages of the Semitic and Aryan families. Through this research, he was convinced that they were once joined in the earliest ages but soon diverged, with the Aryan races being more agile at adaptation than the passive Semites. As a reflection of this, Renan had pointed out how "static" the Semitic languages were over time, never displaying the evolution and change observable in the Indo-European language group.<sup>72</sup> This made perfect sense to Fétis, as he would similarly point out how so much Semitic music, with all its microtonal inflections, seemed to have changed hardly at all over three thousand years.

Music thus seemed to offer a striking confirmation of the Indo-European thesis that was being developed by the philologists: Aryan tribes originating from central Asia migrated in waves to Europe over several millennia, importing in the process the tonalities of the East. Over time, these tonalities evolved, just as did languages, intermixing with other tonalities, and gradually evolving into a tonality of diatonicism that would soon open up unforeseen possibilities of harmonization, prolongation, and modulation, all features necessary for music to become a true art form.

Evidence for the Eastern origins of European music could also be found by studying the history of musical instruments. A good example was the familiar violin. In a study of the history of bowed instruments that he published in 1856 (prefacing a history of the violin and its greatest maker, Stradivari), Fétis made the bold claim that the violin could ultimately be traced back to a family of bowed instruments that began in India some five thousand years before the Christian era (*Anthony Stradivari*, 2–5). In his earlier scholarship, we may recall, he had given more credit to those northern tribes who had supposedly brought harmony to southern Europe along with various string instruments (such as the Russian *gousli* and *goudok* or the Welsh *crwth*). While Fétis earlier acknowledged that there were indeed plucked string instruments from the East that undoubtedly were of greater antiquity, he was sure that the bow was a unique development of these northern European tribes. But as Fétis learned more about Indian musical instruments, he discovered the existence of the *ravanastron*, a simple instrument of two strings made of intestines of the gazelle attached to a hollowed cylinder of sycamore

wood (*Anthony Stradivari*, 2–3). Too his surprise, it, too, was a bowed instrument. Fétis deduced that it must have served as a model for many subsequent instruments, such as the Arab *kemângeh* and *rebab*, and even the oldest European string instruments, such as the Russian *goudok*, the Welsh *crwth*, and finally the medieval *rebec* and other early members of the violin family. The fact that all of these bowed instruments could be traced back to this simple instrument from India in a direct lineage was a revelation to Fétis, confirming the capital importance of India as the fount of Western art. At the time he was writing his *Résumé*, he admitted that “I had only a very imperfect knowledge of India, in a musical point of view.” But fortunately,

Favorable circumstances . . . during the lapse of twenty years, have enabled me to fully investigate the ancient musical doctrines of this country, and . . . have brought into my possession a portion of its native instruments,—these circumstances, I say, have enlightened me; so that I can now reiterate, without any reservation, *there is nothing in the West which has not come from the East.* (*Anthony Stradivari*, 9; emphasis by Fétis)

“Rien dans l’Occident qui ne vienne de l’Orient.”<sup>73</sup> This might well serve as Fétis’s motto for his *Histoire*. Again and again, he marvels, we see how the patrimony of the East bequeathed to the West both musical tonalities as well as the instruments to play these tonalities, not to mention the languages we speak today and the blood running through our veins. Each of the many peoples, races, nations, languages, and—let us not ever forget—music that we now find in breathtaking diversity in the West, all can be traced back to the great Aryan migration from northern India. The spectacle was a remarkable one to behold:

At epochs anterior to all historical records, and by slow migrations, the European races have advanced from India through Bactriana, Persia, Arabia, and Armenia; then, after having crossed the Hellespont (the present Dardanelles), they have invaded the vast countries now known by the names of Roumelia, Transylvania, Wallachia, Servia, Sclavonia, Croatia, Hungary, Styria, and Bohemia. Subsequently, when pressed by other masses of people arriving by the same route, they have abandoned these stations in order to disperse themselves in various directions, crossing the great rivers, such as the Danube, the Elbe, the Rhine, the Saône, and the Meuse . . . and sub-dividing themselves into an infinity of tribes continually at war with one another. (*Anthony Stradivari*, 12–13)



Fétis goes on to note that “some learned men of the greatest eminence” who study the earliest languages have established these historical facts beyond any doubt and thereby “triumphed over the most obstinate incredulity.” But our musicologist is quick to add that music, too, may offer evidence for these filiations. He believed his own scholarship could show how music reveals as much about a given people or race as their language. Indeed, music could offer a whole new body of evidence for ethnologists, linguists, and anthropologists studying the origin of man.

Scholars whose works have the aim of penetrating the mysteries of the origin of peoples have recognized that the characteristics by which they differ or resemble each other are due to physiological organization, languages, and religious traditions. I propose to demonstrate in this history that the analogies and oppositions of principles on which are based diverse systems of music are not less characteristic of the differences between the races and that these systems have primordial types that still survive, notwithstanding the modifications that they have experienced in certain places by the mixing of peoples or by particular circumstances. In considering it from this point of view, the history of music cannot be entirely separated from the study of geology, anthropology, ethnography, or linguistics; for one cannot follow the analogies and the divergences of the principles of this art or follow its transformations except by the knowledge of the developments of the human species, of the original characteristics by which the races are distinguished, of the movements and the migrations of the races, and finally of their mixtures through invasions and conquests as well as the influences that they have exercised one on another. (*HGM*, 1:7–8)

An example of the kind of evidence Fétis was thinking of concerned the music of South America—specifically the indigenous populations of Mexico and Peru. Not only do their scales resemble the microtonal scales of the Arabs, their ornamented singing and “melancholic accents” seem to evoke music from the Levant, leading Fétis to suggest that these South American peoples must have descended from an early branch of the Semitic races, though how this early migration took place is unknown (*HGM*, 1:105–6). Through such evidence, music could offer tantalizing new clues regarding the filiations of races.

## SCIENTIFIC ASPIRATIONS

We see that Fétis was becoming ever more excited and confident that music offered new and potentially compelling evidence for the scholars of ethnology and comparative linguistics, and he became eager to share it.<sup>74</sup> Not unlike his great theoretical predecessor Jean-Philippe Rameau, it seems Fétis aspired to be accepted as a savant in the contemporary world of scholars. And also like Rameau, he decided to do so by presenting some of his research before a tribunal of scholars to acquaint them with his work and seek their approbation.<sup>75</sup>

For a session of the Société d'anthropologie de Paris held on February 21, 1867, Fétis submitted a paper titled "Sur un nouveau mode de classification des races humaines d'après leurs systems musicaux" (On a new means of classifying human races based on their musical systems). In his essay, he laid out his thesis that tonalities were as certain markers of racial groups as were languages, and this evidence might be of value to those scholars seeking to reconstruct the complex stemmata of languages and racial families in Europe.<sup>76</sup>

This essay summarizes many of the arguments Fétis subsequently developed in his *Histoire* (the first volume of which appeared two years later). One of his central claims was that since the earliest Aryan and Semitic tribes both utilized microtonal divisions of the octave, they must have been related. Indeed, he went further by insisting (following the thesis of Renan) that "the origins of the Aryan and Semitic people are identical" despite their subsequent bifurcation. The Aryans and Semites together constituted a single "white race" sharing a common tonal heritage, differing in tonality from the "yellow races" of East Asia and the "black races" of Africa. His take away was breathtaking in scope as he then brought his theory to the door of modern European tonality:

We can thus say with assurance that all people who have the same point of departure for the first note of the tonal scale [A], and who divide this scale into smaller intervals, are the races of Aryans, Hindus, Persians, Hebrews, Arabs, Phoenicians, Chaldeans, Assyrians, Egyptians, Lydians, Phrygians, Ionians, Greeks, Etruscans, and Latins. We too, with the attractions of our harmony and its multitude of ascending and descending tendencies retain something of these small intervals that stimulate our nervous sensations, notwithstanding the immense distance that separates us from our primitive roots.<sup>77</sup>

We might note here that not all who heard his paper at the Anthropological Society endorsed his arguments linking race and tonality. One skeptical member of the academy named Pierre-Louis-Jean-Baptiste Gaussin thought that musical tonalities were probably less a reflection of race than of civilization, and therefore they could change quickly. Conversely,

similar musical systems do not indicate a common origin. A people might quickly adopt the music of another people. M. Fétis cites the Tahitians whose scale at the time of Cook possessed only quarter tones. But today, Tahitians sing the same music as we do and take great pleasure listening to our orchestral music.<sup>78</sup>

As a confirmed monogenesist, Gaussin thought that musical faculties “were the same everywhere” and there were thus no great differences between the races. Throwing cold water on Fétis’s entire thesis, Gaussin concluded that music does not offer reliable evidence regarding the origins of any people given how quickly tastes can change, and thus it proves to be of less value to anthropologists and linguists.<sup>79</sup>

Fétis was fortunate enough to receive some support from the president of the Society, Paul Broca, the great physician, anatomist, and anthropologist, who took issue with Gaussin’s criticism. He agreed with Fétis that the connections between musical scales and language seemed compelling. Certainly, Broca concluded, evidence drawn from music is of no less importance than that of the other plastic arts regularly cited by anthropologists in their studies.<sup>80</sup>

Evidently undeterred by the criticism of Gaussin, Fétis continued to insist that tonalities could be reliable markers of race. All we needed to do was look around and see the diversity of tonalities outside of the great *race blanche* to see how resilient a given tonality might be. Among these were the “savage” races of Polynesia, Africa, the Caribbean, and the natives of North America, whose tonalities retained a simplicity and stasis that demonstrated to Fétis the inferiority of their intellectual development. Their music, as recorded by large numbers of European explorers and colonialists, seemed infantile in its simplicity, usually not having more than three or four notes that would be repeated incessantly (*HGM*, 1:11–16).

A different outlier was the Finnish people, who seemed to have a unique genealogy differing from that of all other European tribes. Their racial independence is attested by an unusual scale system, which consists of a single pentachord—G, A, B $\flat$ , C, D—unique among all other European tonalities (*HGM*, 1:142). This confirmed the findings of several philologists who had

determined that the Finnish language was not a part of the Indo-European stemma but rather had origins much farther afield as part of a great Uralic family of languages (which included Hungarian).

### PENTATONIC PAUSES

If there was one glaring exception to the picture painted by Fétis of the uniform march of European tonalities toward heptatonic diatonicism, it would be the case of the Celts, and more specifically, of the Scots and Irish, who apparently had long cultivated partial (or “gapped”) scales in their music that were found nowhere else in Europe. Most extraordinarily, we find evidence of a five-note scale of whole tones and trihemitones that lacked any semitones whatsoever and seems more closely akin to the scales of China and the Far East than to those of any central Asian tribes. What is the explanation of this unexpected tonality found in the most northern climes of Europe?

It was a question that had long engaged several British musicians and scholars who began looking at Scottish folk music during the eighteenth century. Charles Burney thought (in typical Enlightenment fashion) that the origins of the “old Scots scale” must be traceable to ancient Greek practice. He found that source in an “old enharmonic” scale described by Plutarch, which Burney transcribed as follows: D, E, F, A, B $\flat$ . (A “new enharmonic” scale involving quarter tones was evidently a later addition by the Greeks.) This “old enharmonic” scale is obviously not anhemitonic (containing as it does two semitones). But Burney believed that in its omission of the fourth and seventh scale degree, it can be heard as an ancient ancestor of the later pentatonic scale, “the old Scots scale in the minor key.”<sup>81</sup>

As striking as the pentatonic scale seemed to be in defining Scottish music, though, it was hardly the only scale used by the Scots. As some musicians began to look more closely at the repertoire of Scottish folk music, a few concluded that pentatonic music was actually something of an exception. In all of the many collections of Scottish folk melodies published in the eighteenth and early nineteenth centuries, there were relatively few melodies notated in a purely pentatonic mode. One skeptical writer by the name of Colin Brown went so far as to state in 1883 that “anyone who will take the trouble to examine Scottish music will find that not more than a twentieth part of our old melodies are pentatonic, or constructed upon this form of the scale.”<sup>82</sup>

Of course it is possible that many of the traits of early Scottish pentatonism were obscured over the years by the infiltration of diatonicism, not unlike the contamination of Gregorian tonalities by traits of modern tonality

about which so many clerics complained. Alexander Ellis thought as much when he noted that fully a quarter of the tunes from the collection to which Brown referred actually looked very much to have been pentatonic at one time. It was the introduction of the leading tone at cadences or occasional passing notes on the fourth degree that seems to have corrupted the tunes, and Ellis assumed these must represent later alterations by singers or editors whose ears had been too exposed to modern tonalities.<sup>83</sup>

But it was not the uniqueness of this scale to Scottish folk songs that so impressed English observers. On the contrary, it was its ubiquity around the world. Burney did not fail to notice that the "old Scots scale" was similar not only to the Greek "Old Enharmonic" mode but actually identical to the "Chinese scale." Reporting on a secondhand account, he wrote, "With respect to the music of China, Dr. Lind, an excellent judge of the subject . . . after residing a considerable time in that country, assured me that all the melodies he heard there bore a strong resemblance to the *Old Scots tunes*."<sup>84</sup>

The possibility that the music of the Celts (or ancient Greeks, for that matter) might be rooted in the music of the Chinese was certainly an alluring one for many European scholars. Going back at least to the Renaissance, China had cast an irresistible appeal on the Western imagination as the origins of so much gnostic wisdom. By the nineteenth century, this idea had if anything grown. (Hadn't Hegel famously argued that the general arc of world civilization went from East to West?) But the question of how this musical system of the Chinese might have made its way to Europe, let alone the northernmost Scottish highlands, was a mysterious one.

One German writer, Gottfried Wilhelm Fink (a music theorist and editor of the *Allgemeine musikalische Zeitung* from 1828 to 1841), attempted to explain the connection in 1831. Fink speculated that in the great migrations that brought Asian tribes to Europe many thousands of years ago, some of these migrants must have brought with them knowledge of the pentatonic scale. Perhaps these were Mongol invaders who knew something of Chinese music when they overran central Asia, thereby inseminating North India or Persia with the pentatonic scale. Then again, perhaps some of this knowledge was picked up by Phoenician sailors in unrecorded journeys to the East and which they then disseminated while plying the waters of the Mediterranean and Atlantic coasts.<sup>85</sup> However it arrived, the pentatonic musical language seemed to be one of the great inheritances of the West from far eastern culture, and it was the Scots above any other people in Europe who had conserved this precious heritage.

But what if the pentatonic scale was not simply a pocket souvenir of the East that had somehow made its way westward all the way to the Scot-

tish highlands? After all, more and more evidence was emerging of pentatonic scales in multiple nations and races around the globe. This suggested to many observers that the pentatonic scale emerged organically in these differing peoples and races as one of the very first musical languages of man. Burney had already proposed this idea when he wondered whether pentatonic music is “a species of music that is natural to a people of simple manners during the infancy of civilization and arts among them.”<sup>86</sup> Two British writers soon latched on to Burney’s hunch. Alexander Campbell (1798) had thought the pentatonic scale to be the “primary scale of music” with which all primitive peoples would begin, while George Thomson (1822) called it the “National Scale” in that it forms the basis of the music of China, Persia, India, “the Moors of Barbary,” and even the natives of North America.<sup>87</sup> So instead of starting (as Fétis would later argue) with musical scales loaded with chromatics and enharmonics that were eventually shed over time leaving a lean, diatonic scale, they speculated that the earliest music might have started with something like a pentatonic scale and then over time expanded to diatonic and then chromatic forms.<sup>88</sup> This might be proven if one could show vestiges of this pentatonic origin in the seven-note modes that eventually developed in the West.

It was an interesting thesis for many French musicians, for whom the music of Scotland had always held a particular fascination.<sup>89</sup> This was not simply because the French believed that they shared a close kinship with their northern Celtic neighbors. (The Gauls, as anyone who has read an *Asterix* comic book will know, have long been considered to be a part of the Celtic race.) Then there was the special case of Brittany, which as we saw in the last chapter had been seen as retaining some of the most authentic expressions of its Celtic heritage on the continent.<sup>90</sup> Yet pentatonic music was oddly not a part of this shared inheritance. In all of the earliest collections of Breton folk music that were mentioned in the last chapter (by Mahé, Henry, Villemarqué), there was not a single tune we might confidently classify as pentatonic. This seemed confirmed in the authoritative collection of 1913 by Maurice Duhamel, which for the first time employed the phonograph in the recording and transcribing of Breton folk melodies.<sup>91</sup> Again, there is not a single tune that follows a pure pentatonic mode.

Yet Duhamel, a composer and fervent nationalist from Brittany, was able to sneak in the pentatonic scale through the back door, so to speak. In his study of the “fifteen modes” of Breton folk music published in 1910, he claimed to show that most of the modes that Bourgault-Ducourdray had identified as those used in contemporary Greek folk music (shown in his ex. 14) and that, of course, he had traced back to Greek origins, were actually

built on the same “pentaphone” scales used by the Scots (fig. 5.3). Far from being unique to the music of Brittany, Duhamel was convinced, this pentatonic “substratum” was a “primitive scale” that underlay the ancient Greek modes and indeed all diatonic music of the “asiatico-européenne” people.<sup>92</sup>

This “pentatonic as aboriginal tonality” thesis had gained some traction through the nineteenth century, with several German scholars such as Hermann Helmholtz, Hugo Riemann, Carl Engel, and Carl Stumpf each embracing a version of the story. Tiersot was particularly enthusiastic about the idea, as it confirmed his monogenetic beliefs that all races can be traced to a common origin and all people must climb the same scalar ladder in their musical development.<sup>93</sup> Even in the repertoire of chant, many scholars in the twentieth century have found confirmation of the theory.<sup>94</sup>

We will return to this argument for further consideration in the next chapter. For now, let us return to Fétis and see what he had to say about the origins of pentatonic music among the northern Celts. Oddly enough, there was not much. In his very first published remarks on Scottish music, Fétis made no mention of pentatonicism.<sup>95</sup> He did speak about an “original physiognomy” of Scottish melodies, but this was more about their unusual rhythms and modulations.<sup>96</sup> And as we have already seen in his “Résumé philosophique de l’histoire de la musique” of 1835, when he finally got around to quoting some examples of Celtic music, there was no notice of any pentatonic scale. There was an Irish song that we already have looked at in chapter 3 (ex. 3.11) that followed a hexachordal scale lacking a leading tone, and there was a second Irish tune that followed a Mixolydian-type scale (*Résumé*, cxli). If there was anything distinctive about Celtic folk music, it was not a single five-note scale but rather a more general family of differing “gapped” or “incomplete” scales of which the pentatonic was simply one member.

Having now heard some of Fétis’s ethnology in the later *Histoire*, we should not be surprised to find that he also had some new ideas about the origins of Celtic music and its various “incomplete” scales. By that point, as we have seen, he was arguing that the musical tonalities that came into Europe during the great migration of Aryans all originated from central Asia. Thus, Fink’s claim that the origins of Scottish pentatonicism lay in China was dismissed by him out of hand.<sup>97</sup> After all, the Celtic languages were closer to Sanskrit than just about any other European tongues. (Adolphe Pictet had convincingly documented these linguistic filiations in his study of 1837, a work that Fétis repeatedly would cite.<sup>98</sup>) In any case, one does not need to go to China in order to find “incomplete” scales such as the pentatonic; he had already noted that in a number of Indian modes, one or two of the notes of the seven-note diatonic scale could be suppressed to create six- or five-note

TABLEAU C

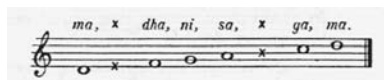
Génération du système modal des Bretons  
par l'échelle pentaphone

GAMME PRIMITIVE	}	FA	Tonique du groupe LYDIEN.	3 formes modales.....	Hypolydien. Lydien. Syntono-lydien.
		SOL	Tonique du groupe PHYRGIEN.	3 formes modales.....	Hypophrygien. Phrygien. Mixolydien.
		LA	Tonique du groupe DORIEN.	2 formes modales.....	Hypodorien. Dorien.
		DO	Tonique du groupe MAJEUR.	3 formes modales.....	Majeur-tonique. Majeur-dominante. Majeur-médiate.
		RÉ	Tonique du groupe LOCRIEN.	2 formes modales.....	Hypolocrien. Locrien.

N.-B. — On a exclu de ce tableau le groupe mineur moderne, importé en Bretagne par la musique savante.

Figure 5.3. Maurice Duhamel, "Les 15 modes de la musique Bretonne," 739. Duhamel explains in his article how each of these ancient modes is built from one of the five rotations of a classic "major" pentatonic scale in which two additional tones were eventually added but still being subordinate to the original five-note nucleus.





Example 5.6. Fétis's example of an Indian pentatonic scale ("hindola") created by the "suppression" of two notes of the diatonic scale. *HGM*, 2:214.

species of scales.<sup>99</sup> One of these scales—a mode that he labeled "hindola"—was virtually identical to the "major pentatonic" of the Scots, save for the different tuning of the Indians due to their use of śrutis (ex. 5.6). We may recall that this "hindola" scale was the one he corrected in the transcription of Jones (ex. 5.3). Fétis's conclusion was clear: it was Indian music, not Chinese music, that was the root of Celtic melodies. As he compared the many related *gammes incomplètes* of the Irish and Scots with those of the Indians, he became resolute in his conviction that the two were historically related. Of course this thesis also presented a number of open questions. "If we would ask by what circumstance [these scales] were introduced from India into Ireland, we will have to admit that we simply do not know, since the facts in question are pre-historic." All we can do is to acknowledge the mystery while reasserting truths that are not subject to doubt, "the identical construction of scales between two countries so far removed from one another and so distant in time" (*HGM*, 4:399).

We see then that Fétis was reluctant to sanction any kind of link between the Chinese and the European Celts. (This may be one reason he tended to downplay the pentatonic scale in talking about the Scots and to emphasize species of modal or more general "gapped" scales as peculiar to Celtic music.) Still less was he inclined to think about the pentatonic scale as some universal aboriginal scale. Too many scholars, he cautioned, have devoted themselves to the search for musical origins at the expense of "devoting themselves to making a strict analysis and rigorous classification of intellectual faculties." Thereby, "they stuck to searching for the origin of the scale in lieu of accepting the scale as a fact whose properties it was necessary to analyze in order eventually to deduce its systematic results" (*Esquisse*, 100).

It seems that Fétis had become convinced that the Chinese use of the pentatonic scale was *sui generis* and that any connection to the European usage of the scale would be implausible. For whatever else one may say about Celtic music, there was never any limitation on how they developed their music, as can be seen by the many differing scales they employed in their music, not to mention their development of a kind of harmonic playing on their various harps.

Not so the "yellow or Mongolian" races of the Orient, who on the con-

trary, seemed incapable of moving beyond the simplest types of pentatonism in their music. For all the impressive achievements of Chinese civilization, Fétis found it astounding that their music remained so static.

Among the yellow peoples, the arrangement of notes in the scale is such that semitones are never used, and their suppression precludes any possible tendency of one note to another. This crude tonality gives their music a most strange character. (*HGM*, 1:55)

Yet there was something even more shocking to him about this story. As Amiot had documented, as far back as the sixteenth century, some Chinese music theorists had learned to divide the octave into an equal chromatic division of twelve semitones even though most all Chinese musicians seemed content to stay within a five-note anhemitonic scale. The full chromatic scale was generated by Chinese theorists through a series of concatenated Pythagorean fifths, much as in Rameau's triple geometric progression. Facing the same discrepancy of a Pythagorean comma in order to close the octave, a Chinese scholar named Zhu Zaiyu in 1584 calculated a means of temperament that allowed for the first known complete division of the octave into 12 equal semitones.

This became one of Fétis's central pieces of evidence that the tonality of a race might have a deep biological basis, something that is not easily suppressed even if an individual is perfectly aware of alternatives. The calculation of an equally tempered chromatic scale by Chinese scholars in the late sixteenth century (not to mention the casting of a set of gongs for the Royal court that were tuned to the twelve-note chromatic scale) was indeed an amazing accomplishment. But it was one without any meaning, for the scale had no value to Chinese musicians. It was a theoretical insight without resonance, so to speak.

This conclusion was not one Fétis arrived at only by deduction. For he had himself ascertained firsthand that those tempered semitones were incomprehensible to the ears of any Chinese listener. The story is an amusing one that Fétis related in a footnote to his *Histoire*.

It seems that when Fétis was on a visit to London in 1851 to attend the World Exposition, he was introduced to a family of Chinese musicians. Intrigued by this chance encounter, he tried a little experiment. (This may be the only instance we know when Fétis played something of a musical ethnographer.) After the musicians sang and played examples of their music for him that remained exclusively within a pentatonic scale, through an interpreter he asked the lead musician whether he knew any music that used

sounds other than those just heard. Fétis reports, "He did not understand what I was talking about. So I sang to him two European scales, major and minor." But instead of singing back these scales in all their heptatonic glory, the Chinese musicians simply erupted in peals of laughter.<sup>100</sup> The experience confirmed to Fétis that the Chinese were simply incapable of replicating the tempered semitones of the West. In his mind, this proved the "imperfect organization" of the yellow race:

The single most striking thing about the music of the Chinese is that this nation, having arrived by theory and experience at the knowledge of the chromatic scale and the twelve tempered semitones of the octave, having demonstrated these intervals by instruments of their own invention, nonetheless by a consequence of their imperfect intellect, overlook the necessity of this same interval of the semitone, without which any musical art becomes impossible, no emotions of sentiment may be aroused by melody, no modulation, no means of avoiding the incessant repetition of the same forms that causes such monotony. A scale of five notes in the octave, melodies without charm, the complete ignorance of harmony, and the abuse of sonority and sound. Thus the music of the Chinese: music that will forever remain imperfect under such conditions. (*HGM*, 1:78)

Fétis's only explanation is that the yellow race of Chinese simply lacked the sensible capacity to attend to these semitones and make use of them in their music even if a number of them could intellectually describe them or even cast sets of bells employing the complete chromatic scale. There could be no better proof that tonality for the Chinese was stunted on account of their limited endowment. Which is not to say, as we have seen, that the tonality of people cannot change over time. But such a change is always a long process of transformation. And the capacity for such transformation seemed limited to those of the white race, where we can observe in history a slow but inexorable progress in the art of music. In a passage that should make the jaw of even the most jaded reader of today drop, Fétis gave full air to his racial view of music history:

The true history of music begins only with the general history of this privileged [white] race, one that never has known the state of savagery and who, on making their first appearance in the world, showed themselves relatively advanced, cultivated, and of such great superiority over all other races that no comparison between them can be made. The white

race alone is endowed with the faculty to modify itself perpetually, to present itself in history in a thousand differing ways. Contrary to the other races, one of which [the black race] remains in servitude and stays in a permanent state of social infancy, and the other [yellow race] which has attained a certain degree of civilization but one that it can never surpass, the white race has developed over time all the consequences of its moral organization. It perpetually adds to the knowledge it has already acquired. It possesses a sentiment of beauty, of grandeur, and it is to it that we owe the creation of pure art and the progress of science. (*HGM*, 1:108)

It does not make for comfortable reading today. But if nothing else, it certainly helps us to understand why Fétis was hesitant to link the Chinese with the Celts of Europe. Whatever similarities their respective tonalities may have, the Celts, as members of the greater white race, were able to develop their music and tonalities in ways impossible for the yellow race of the Orient.<sup>101</sup>

### THE RACIALIZATION OF TONALITY

All of Fétis's rhetoric about the moral and intellectual superiority of the white race and the corresponding inferiority of the yellow and black races may strike the reader as a rude shock. Let alone the repugnant racism that it displays, it seems completely contradictory to the more generous, idealist precepts Fétis had laid out many decades earlier. Where is the Kantian "absolute liberty" of the *Traité* in which all peoples enjoy the "freedom" to choose the tonality suited to their needs and tastes? (It will be revealing and perhaps a bit cleansing to turn back to chapter 1 and reread the quotation on p. 18 for a reminder.) For one who had previously argued that cultures evolved based on metaphysical ideals free from any material determinism, our octogenarian polygenesist now seems to be positing race as an immutable biological factor that fixes the possibilities—and limits—of a given people's music and progress. It all seems an astonishing capitulation to the doctrines of musical "fatalism" that he had earlier scorned so fiercely.

Of course, for anyone who has studied the history of racial biology in the modern era, this kind of talk can hardly be surprising. Since the beginning of the nineteenth century, the French were taking a lead in developing theories of racial classification in their ethnological sciences. It is a familiar if depressing story to us by now.<sup>102</sup> And little by little, these theories impinged on the work of the philologists. It is no coincidence, of course, that racial science was emerging at the same time the pace of European colonialism

was accelerating. Theories of racial difference and hierarchy were groundings in the colonial mindset to justify the subjugation and “civilization” of their “primitive” subjects.<sup>103</sup> The writings on race of Arthur de Gobineau may be an extreme example of this bias, with his adulation of the pure blood of the great white Aryan race and his dire warning about racial miscegenation leading to the decline of Western civilization, but they are nonetheless a sobering indicator.<sup>104</sup> All the more sobering is to discover that Fétis owned a copy of Gobineau’s notorious tract and evidently made much use of it. The copy can be consulted today in the archives of the Royal Belgian Library (Fétis 327 RP). The many passages he marked in pencil through all four volumes give evidence that Fétis was an attentive reader. Indeed, I found no other work in Fétis’s personal library that contains more markings than this one. It would be a highly revealing task (though surely a dismal one) to compare Gobineau’s text with Fétis’s *Histoire*. I suspect it is the source for much of what Fétis wrote about the origins, migrations, intermixing, and eventual settlements of differing racial groups that migrated to Europe. (As only one example, it was Gobineau who had bluntly reduced the human species to three main races: white, yellow, and black—a tripartition Fétis would adopt in his *Historie*.) And while Fétis could be highly critical in places of Gobineau’s prudish concern about miscegenation between the races (e.g., *HGM*, 1:147n1), I think it likely that his work was also a major catalyst for Fétis’s turn to racial biology in his later years and his celebration of the accomplishments of the *race blanche*.

But to be honest, we must concede that Fétis had already smuggled in biology as a factor of tonality in his earlier writings. Look again at the passage from his *Traité* given on p. 18. There he claims that the predilections for differing tonalities exhibited in their music by differing peoples across various cultures and epochs can only be explained by considering “human organization,” later adding that these predilections might indeed have had some relation to the physical “conformation” of the people, their “intelligence, cultivation, language, and physical capacities.” (Kant, we should also not fail to note, articulated similar sentiments of racial determination.) But in these earlier writings, Fétis’s racism still strikes me as subordinated within an overarching idealist metaphysics in which people retained some agency over the kinds of music and tonalities they used. If there were constraints on the choices of a given people, they were due less to the size of their skulls than to a categorical imperative of historical necessity.

Yet by the 1860s, most of Fétis’s idealist metaphysics lay in tatters; his early argument about tonality as the “selection” of a people seemed irreconcilable with his newfound obsession with inherited racial characteristics

determining the kinds of tonality that a given people could have (or be incapable of having, as he thought the case may be). There is perhaps no better evidence of Fétis's change of heart to be found than in a stinging critique he wrote in 1869 of the French philosopher Charles-Bernard Renouvier (1815–1903). Among French philosophers of the second half of the nineteenth century, Renouvier was one of the strongest defenders of Kant's theory of free will and self-determination; he had adamantly rejected the notion that races of people were subjected to any "fatal destiny" that determined their capacity for progress.<sup>105</sup> This was particularly true of the earliest races of man, all of which Renouvier insisted enjoyed the same moral sentiments and a consciousness of liberty even as they may exist at differing stages of development. Renouvier's mistake, Fétis argued, was in not recognizing the importance of a race's intelligence (and ultimately, its "cerebral conformation") for the exercise of such liberty (*HGM*, 1:492). Naturally, Fétis saw such a capacity as primarily the province of the white race.

Throughout the introduction to his *Histoire*, Fétis emphasizes again and again the role race plays in the development of world music. This introduction, comprising the first 183 pages of the volume, offers a concise summary of the ethnological and philological arguments and evidence he will present in all the subsequent volumes; it thus plays much the same role as the *Résumé philosophique* did for the first edition of his *Biographie universelle*. But whereas in the *Résumé* we see peoples and nations as relatively autonomous agents struggling to develop and express their own musical cultures, in the *Histoire* we see the various races subject to their physical capacities and limitations. The very opening sentence of the preface alerts us to this clearly: "The history of music is inseparable from the degree to which the special faculties of the races were cultivated" It is true that Fétis goes on immediately to remind us that this art is "essentially ideal." But it is ideal only in so far as the free will granted to musicians is subordinate to "human faculties, which are unequally divided among peoples as well as individuals" (*HGM*, 1:i). If there was any doubt as to what Fétis meant by this, he cut to the phrenological core in the opening sentences of volume 2: "The sentiment for music, among nations as well as individuals, is due to the conformation of the brain. . . . The relations of sounds do not affect people of races in the same way; what charms one displeases the other precisely because the organs of the brain are not of the same dimensions" (*HGM*, 2:i).

And there is no doubt which race has won the prize in the lottery of brain size: it is the *race blanche*—the "white race," "which alone has produced music that may be elevated to the dignity of art" (*HGM*, 1:vi). It alone among all the races of the world may be credited with the creation of "true art," an

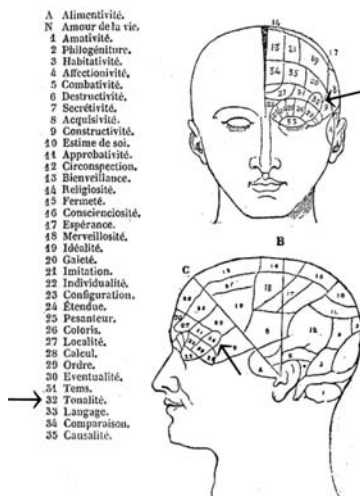


Figure 5.4. Theophile Thoré. *Dictionnaire de phrénologie*. Unnumbered Plate.  
The “organ of tonality” is numbered 32 and is indicated by arrows.

outcome that is as inconceivable as it is impossible among the “black” or “yellow” races (*HGM*, 1:119). For the white race has been blessed by providence with special gifts and a unique charge.<sup>106</sup>

To be sure, Fétis was hardly the first to associate musical development with brain size and “organization.” Already at the beginning of the century, Franz Joseph Gall, considered the founder of phrenology, identified a small area in the brain that was the location for the human capacity, sensibility, and talent for music. According to his doctrine, the more “developed” this “tone” part of the brain was (which is to say, the larger and more “exercised” it was), the greater the musical talent of the individual.<sup>107</sup> This “organe de la tonalité,” as one Belgian phrenologist translated it in 1837,<sup>108</sup> is situated at the lateral part of the rear cerebral lobe. . . . It is a pyramidal circumvolution that lies between [the organs of] constructiveness and time.<sup>108</sup> We also learn in this work that busts of Mozart and Beethoven show this organ to be very developed (as it also is in the facial profiles of Paganini and the singer Maria Malibran). We can see the location of the organ of tonality highlighted in figure 5.4 as number 32.

Fétis never embraced such simplistic phrenological doctrines. (He had actually penned several articles in his *Revue musicale* in the 1830s discussing the phrenological theories of Gall and Spurzheim, expressing skepticism about this pseudoscience as inconsistent with the Kantian ideal of intellectual freedom to which he then subscribed.)<sup>109</sup> But if Fétis doubted that musi-

cal sense could be contained in—and explained by—a single area of the brain lying just above the left eyebrow, his later writings leave no doubt that he believed the musical ability of a race to be closely linked to the development of their brains, as we saw from the quotations above. As his jaundiced pronouncements about the Chinese testify, the sophistication of any people's music was always limited by their biological endowment (*HGM*, 1:487).

It is all a depressing note on which to end this chapter. It may not be quite fair to condemn Fétis as “the venerable sire of a none too brilliant family of musical racists” as Curt Sachs did.<sup>110</sup> (There were many other culprits one could cite from the later nineteenth century for such an honor—one German composer of music dramas comes to mind.) Nor would Fétis be the only one to think about tonality through racially tinged lenses (recall the vignette of German musicology during the Nazi period given in chap. 3). But it cannot be denied that Fétis lent this unsavory chapter of Western musicology an authoritative voice, and that is a reality that we must not attempt to exculpate today. It is of little redemption that Fétis rejected the virulent anti-Semitism so rampant in his day. (Fétis, we recall, always assumed the Semitic people were part of a larger *race blanche* that alone seems to have the capacity for real musical development and progress. And in his personal life, he displayed nothing but genuine admiration, friendship, and loyalty to Jewish colleagues such as Meyerbeer and Halévy.<sup>111</sup>) The more fundamental point is that the crude racism that Fétis displayed in his final writings is not remarkable because of its intemperance. Quite the contrary, it is precisely the banality of his views. Tenets of biological racism would be freely aired and approved by many of Fétis's fellow citizens over the course of the nineteenth century in order to justify Belgium's violent colonialism in Central Africa.<sup>112</sup>

Still, we do not have to search too far to find some alternative discourse. Already in the nineteenth century, there were observers who cautioned against the simplistic reduction of music history to a story determined by factors of ethnicity and race. For monogenesisists such as Julien Tiersot, what united music and musicians across the world proved more consequential than what differentiated them. After carefully listening to the many musicians from China, the Middle East, Africa, and Oceania who had been brought to Paris for the famous exposition in 1889, Tiersot marveled at their unity:

From wherever they come, even the most savage of men possess some notion of art (that is perhaps their greatest superiority). These notions are much more similar and connected to one another from one race to the other than they may first appear. If their outward details seem to differ



enormously, in all places they are based on the same foundation and share the same principles.<sup>113</sup>

Perhaps a younger Fétis would have been more sympathetic to Tiersot's views. We may recall his oft-repeated claims that the human mind is everywhere and every time endowed (according to Kantian precepts) with the double capacities of sensibility and intellectualization (see, e.g., p. 19). Writing in the 1860s, though, our elderly musicologist seemed to have lost his humanitarian faith. Ironically, it was a number of his music theoretical colleagues who presented some of the most compelling rebuttals to Fétis's racial essentialism. By seeking those universal principles of music to which Tiersot alluded, these theorists were implicitly (and sometimes explicitly) refuting Fétis's claim of tonal particularism. For his part, Fétis never tired of criticizing any theorist who believed in universal laws of tonal organization that were applicable to all music and all people at all times. His racial argument was but one new tactic in this ground war.

But the theoretical community remained a tenacious group. The dream of identifying common scientific principles that could explain musical tonality independent of any human variabilities—racial or otherwise—remained an alluring one to many of Fétis's contemporaries. Rather than seeing these theorists as a deluded group of starry-eyed Pythagoreans holding on to discredited notions of universal harmony, though, perhaps we might rather see them as progressive humanists who believed in the ultimate unity of man; perhaps there was, despite Fétis's protests to the contrary, a model of tonality that could link all people and their music together, and it was in the discipline of music theory that this humanistic ethos found its most emphatic voice. It is a peculiar thought, to be sure, and not the way we typically think of the vocation of music theory today (and perhaps not how many theorist back then thought about it either). But in an age that saw racial arguments habitually invoked to justify the colonialization and subjection of peoples deemed inferior to those in the West, it may be heartening to find a cohort of musical theorists who resisted this impulse toward particularism and instead sought to find commonalities. Perhaps tonality, despite Fétis's arguments to the contrary, was something that did not divide mankind but united it.

## Theory

For all the diversity of scales that Fétis claimed to find across cultures and time, there still was a surprising amount of consistency to be observed. His critics were not slow to point out that variations of the seven-note diatonic scale seemed more the norm in world history than the exception. From the ancient Greek octave species to the ecclesiastical modes of the medieval church, from Indian ragas to the Arabic *maqāmat*, a heptatonic scale seemed everywhere and every time the preferred system of tonal organization of peoples, even if the specific order or tuning of the tones and semitones varied among cultures. Kiesewetter expressed this thought succinctly when marveling how the Arabic modes could be easily reduced to familiar Western scales.

The scale of the Arabs, in its simplest diatonic form, is the same one that all civilized people have used to build their own system of music. It must be based upon eternal laws of nature since it seems to correspond so closely to our sense of hearing as well as to the most comprehensible numerical relationships; once Man conceives this and abandons his simple prejudices against other music, then he will find himself easily attracted to them.<sup>1</sup>

While Fétis mocked Kiesewetter as having an obviously defective ear for drawing this simple observation, others were coming to similar conclusions. Francisco Salvador-Daniel, we may recall from the last chapter, thought those vaunted third tones of the Arabs were in reality just slight bendings of the diatonic scale improvised by singers and oud players. He was convinced that the modes of the Arabs, however much they were different from our major-minor system, nonetheless were made up of “tones and semitones as

with us," adding that "I have never been able to discover in Arab music, those third and quarter tones which others claim to find."<sup>2</sup>

Adrian de La Fage came to a somewhat similar conclusion about Indian music in his history of oriental music published two years after that of Kiesewetter. While he carefully read William Jones's theoretical description of the ragas tuned to various combinations of *śrutis*, La Fage found nothing but inconsistency and obscurity in the manner in which they were reported and organized, leaving him skeptical about their actual use in practice.<sup>3</sup> He soon became convinced that these *śrutis* must have been ignored by musicians and that the true "primordial scale" of the Indians must have been diatonic like ours (La Fage, 425). In short, there was "nothing, in a word, that differs appreciably from European forms in regard to its tonality" (529). He came to much the same conclusion about Chinese music. While some orientalists would make much of Chinese pentatonicism, those *pien* tones that would complete the diatonic scale were as likely to be employed by Chinese musicians in practice as omitted, leading him to conclude that "Chinese music is thus based on the same principles and the same alphabet as that of Europe . . . the difference consisting only in the manner in which these identical elements are combined and distinguished from one another" (115).<sup>4</sup>

Perhaps the most ardent tonal universalist was Julien Tiersot. We heard from Tiersot in the previous chapter rejecting quarter tones or any other microtuning as an essential element of folk tonality. In the same year that he published his book on the *Chanson populaire* (1889), he had occasion to attend the great Paris International Exhibition. There, in numerous international pavilions spread across the Champs de Mars and over the six months of the exhibition's duration, Tiersot heard a number of musical performers from around the globe: Asian, South Pacific, Middle Eastern, African, and Indian. (In fact, as Annegret Fauser has pointed out, this was probably the first occasion for Parisians to hear for themselves some of the exotic music that they could until this point only have read about or heard in quotation through parodies by Western composers.<sup>5</sup>) Despite all the diversity of music he heard at the exhibition, Tiersot was able to transcribe most of it using basic Western notation. It is true that many of the scale systems and modes were singular in their orderings of tones and semitones. And to be sure, musicians would often raise or lower notes in capricious ways that would result in some odd sounding intonations when performing. Still, when it came to the basic tonal vocabulary of the music, just about everything could be easily expressed using some subset of the Western diatonic scale. Rather than hearing division and difference, Tiersot noticed unity and universality. (Recall his observation at the end of the last chapter in which he marveled how the

musics of all races at every time are “based on the same foundation and share the same principles.”)

This was a conviction that was reinforced when Tiersot visited—and wrote about—a second international exposition in 1900, in which new musical troupes from the Orient were brought to Paris. While none of the musicians from Japan or China caused a stir as animated as that during the exposition eleven years earlier, Tiersot was able to spend more time listening to their performances and contemplating their remarkable similarities. And his previous supposition regarding the ubiquity and universality of the diatonic scale was only reinforced. “The truth is that the basis of all music among all people rests on, and always has, the diatonic scale.”<sup>6</sup> It was all a rousing vindication of the monogenetic doctrine.

We should not be altogether surprised to learn that as a young music student steeped in the teachings of Rameau, Fétis accepted as self-evident the existence of a single universal scale of music (see his confession in *HGM*, 1:iii). But as his own theories of tonality developed, he soon abandoned this idea. We have in chapter 1 seen how and why Fétis would come to reject any suggestion of a universal scale. It violated his fundamental idealist premise (at least in 1832) that no people were destined to follow a single tonality. And, of course, it would undermine the most potent argument for his theory of historical and racial diversity of tonalities across time and place. But many music theorists of Fétis’s day resisted his argument and continued to hold fast to the belief that there was something more fundamental to the diatonic scale than Fétis would acknowledge. Even as Fétis railed against them, a large number of nineteenth-century music theorists continued the quest begun by Rameau to find a natural basis for the major and minor scales in acoustics or mathematics, and perforce, tonality writ large.

This is not to say that Fétis thought that there were no principles governing the kinds of harmony or tonality a given people might chose. As we have seen in chapters 1 and 5, there were indeed very good reasons for believing that indisputable philosophical and scientific arguments could be found to explain the options (and limits) of tonal selection. But Fétis remained adamant throughout his life that there could never be a single encompassing tonality for all of mankind. The diverse musical styles and their attendant scale systems that he had exposed in his writings prove, he was certain, that tonality has always varied over time and place.

But if Fétis remained ever scornful of those theoretical “fatalists” who insisted that there was one universal tonality commanded by nature, he was equally disdainful of those theorists (if that is the right name for them) who went to the other extreme and gave up altogether the search for any rational

principle for explaining harmony or tonality. These were mainly music pedagogues who reverted to rote empiricism to describe and categorize harmonic practice without seeking to penetrate it more deeply. The most egregious of the bunch, he thought, were those harmony teachers who mechanically placed triads and seventh chords above each degree of a scale and assigned each one a roman numeral, thereby giving these chords an ontological status that stood in complete contradiction to the natural harmonies of the scale. Such abnegation of theoretical responsibility was no less objectionable in Fétis's view than were the universalists who attempted to yoke all musical scales and harmony together by some common principle. From all sides, it seems, theorists and pedagogues of music failed in their quest to understand and explain the true basis (and diversity) of musical tonality. It was a depressing tale, to be sure, but one that demanded to be told.

#### THE *ESQUISSE DE L'HISTOIRE DE L'HARMONIE*

In 1840, Fétis published a small monograph of 178 pages in a limited edition of fifty copies that was evidently meant to be distributed to a small circle of his friends and supporters. It was the *Esquisse de l'histoire de l'harmonie, considérée comme art et comme science systématique* (Outline of the history of harmony considered as art and as systematic science).<sup>7</sup> Compiled from a series of articles that Fétis had published serially in the *RGM* in 1840, the *Esquisse* was one of Fétis's most unusual monographs.<sup>8</sup> At once a rapid overview of the development of harmony in the music of composers from the early Middle Ages to the modern era (*l'harmonie considérée comme art*) as well as a critique of the various attempts of theorists to understand and explain these developments (*l'harmonie considérée comme . . . science systématique*), it is no wonder that the monograph was aimed at a very small and erudite audience of "earnest men whose interest it merits with its subject matter."<sup>9</sup> Parts of the *Esquisse* would enjoy greater circulation when Fétis decided to heavily revise the text and include its second half as part 4 of his *Traité complet de la théorie et de la pratique de l'harmonie* that would appear four years later, where it was simply called "A critical examination of the principal systems of the generation and classification of chords." (Fétis jettisoned most of the first part of the *Esquisse* documenting advances in harmonic writing through the Middle Ages and Renaissance in favor of his discussion of music theorists; presumably his ever-promised general history would contain that part of the story in greater detail.)

The *Esquisse* has been called by some scholars as the first real history of music theory.<sup>10</sup> And that it may well be.<sup>11</sup> But we must acknowledge that it

was a decidedly partial history with a very pronounced agenda. Fétis did not attempt to hide that this monograph would ultimately tell a depressing tale of poor musical judgement, faulty science, and even more faulty philosophy, all of which had led virtually every theorist over the past eight hundred years astray. It would be a story about “the constant and almost always barren efforts of a vast number of erudite men, philosophers, geometricians, and great musicians” (*Esquisse*, xliiii). To be sure, there were fleeting moments of insight to console us in passages from Marchetto, Zarlino, Rameau, Sorge, Kirnberger, and Catel. But overall, Fétis found a rather dispiriting picture, as no one individual properly understood the true theory of tonality. On the contrary, most theorists became lost in futile speculations about mathematics, acoustics, nature, and even obfuscating esotericism, while others fell lazily into the safe reflex of undisciplined empiricism. Thus, there was a lot of cleaning up for Fétis to do. This was to be the work of the *Esquisse* and later the fourth book of his *Traité*.<sup>12</sup> In this last version, Fétis critiques four basic “chapters” of musical theorizing:

1. Systems based on acoustical phenomena, harmonic progression, and the mechanical aggregations of intervals
2. Systems based on arithmetic progression and the chromatic scale
3. Systems based on an arbitrary choice of fundamental chords
4. Systems based on an arbitrary division of the monochord<sup>13</sup>

One might guess already that the “systematic” part of his analysis is a relative one. But for reasons to be explained, he does believe that these chapters present four distinct categories of theorizing that deserve independent analysis. Let us take a closer look at each one in order.

1. “SYSTEMS BASED ON ACOUSTICAL PHENOMENA,  
HARMONIC PROGRESSION, AND THE MECHANICAL  
AGGREGATIONS OF INTERVALS”

While the title of Fétis’s first chapter seems eclectic, to say the least, his capacious description is meant to cover the equally capacious theory of Rameau and his followers. It can be no surprise that Fétis thought it important in his analysis to begin there, since there was no question that Rameau stood as the dominating historical music theorist in the minds of most French musicians of the nineteenth century. Even if his method of the *basse fondamentale* was no longer taught in the conservatory, his reputation and accomplishments as a *philosophe musical* made him the paradigmatic figure of the learned

music theorist. "The writings of Rameau," Fétis wrote in his biographical entry for Rameau, "despite their enormous faults, have had more success and have exercised a far greater influence than any other treatise of music" (*BU*<sup>1</sup>, 7:350).

In the chapter on Rameau, Fétis recounts the earliest attempts of the Clermont theorist to formulate his theory of harmony contained in his *Traité de l'harmonie* of 1722. Using a method he encountered in reading Descartes's *Compendium musicae*, Rameau was able to derive the major triad by plotting aliquot string divisions on a monochord. But he quickly runs into difficulties generating other chords necessary for his system of harmony, including the minor triad and various species of dissonant seventh chords (Fétis, *Traité*, 201–5). This led Rameau to try rearranging and adding major and minor thirds to the major triad in order to produce these various chordal types. Still, although his method was capricious, there was a brilliant insight in all this madness that would forever "immortalize its author, had he not any other claim to fame": the concept of chordal inversion (*Traité*, 209; *Treatise*, 204). By means of his theory of chordal inversion, Rameau was able to show relations of chords that were otherwise considered distinct according to thoroughbass practice. It was a revolutionary insight, since "without it, no system of harmony is possible; it is a general idea that applies to any good theory, and which one may consider as the first foundation of the science."

Fétis then notes that in his next publications, Rameau had discovered the phenomenon of harmonic resonance in the vibrating string (*corps sonore*) and invoked this to generate the chords of his system. Yet the *corps sonore* proved to be no less problematic in accounting for the minor triad and dissonant seventh chords, leaving him to apply the "superposition" and "subposition" of thirds in a most capricious and arbitrary way (*Traité*, 206; *Treatise*, 200). This is not to mention that the intervals of the harmonic series are generally out of tune compared to the tempered chromatic scale and are thus unusable. Most problematic for Fétis was Rameau's treating of chords as "isolated" entities severed from their particular location on the scale and thereby discarding "all the rules of succession and tonal resolution established by the earlier treatises of accompaniment and composition . . . conforming to the natural laws of tonality" (*Traité*, 206; *Treatise*, 200). He attempted to make up for this omission by developing the notion of the *basse fondamentale*. But Fétis finds that the rules Rameau established for regulating a succession of chord fundamentals are arbitrary, sometimes faulty, and ultimately contrary to "musical instinct and the laws of tonality" (*Traité*, 208; *Treatise*, 202). The fundamental bass, Fétis concludes in his survey, is useful only as a

means of “verifying” a progression according to his rules; but it is incapable of establishing the true laws of tonality. So much, then, for Fétis’s analysis of Rameau’s theory of harmony.

Now given that Rameau published some dozen differing texts on questions of harmonic theory over a forty-year span and is credited by most objective observers as having formulated some of the most original and profound insights into harmonic tonality, Fétis’s account of Rameau’s legacy is miserly to say the least. (We will later in this chapter consider in some detail one of Rameau’s most significant theoretical ideas from his later writings that Fétis does not mention: the “triple geometric progression.”) One does not need to probe his mind too deeply to imagine why this was so. Fétis was surely self-conscious about his own relation to his illustrious predecessor. In many ways, Fétis saw himself as the same kind of musical philosophe as Rameau, both of them attempting to establish a comprehensive theory of harmony rooted in the most advanced scientific understandings of the day. Thus, while praising Rameau, Fétis had also clearly come to bury Rameau.

What was certain, Fétis was convinced, was that Rameau’s legacy spawned a large number of followers who would adopt parts of his theory and develop them in pernicious ways, whether it was his attempts to generate chords through string divisions, acoustical resonance, or simply the arbitrary juggling of thirds. (We can see now why this chapter has such a convoluted title in Fétis’s treatise.) In quick order, Fétis dismisses, and in the process makes a good deal of hash, the theories of Marpurg (containing a “mechanical and absolutely arbitrary construction of dissonances”), Tartini (whose system is “almost exclusively speculative and presents only insignificant practical applications”<sup>14</sup>), and the Baron Blein (an inept theorist who attempted to extend Rameau’s *corps sonore* to include the resonance of plates and cylinders).

Blein’s work, though hardly notable for any great erudition or influence, is worth dwelling on for a moment as it is so representative of many other theorists who continued to agitate for the acoustical grounding of musical harmony in France. Blein was an engineer who became fascinated with Chaldni’s work on vibrating plates. In a small publication from 1827, he attempted to show how the nonharmonic partials emitted by such vibrating systems might offer a basis for the many dissonant harmonies and their irregular resolutions found in the music of contemporary composers (and perhaps many chords not yet thought of by them).<sup>15</sup> Most significantly, he claimed to find Fétis’s beloved interval of the tritone generated when certain rectangular plates made of crystal were bowed. In example 6.1 we can ob-





Example 6.1. Various chords derived through the resonance of vibrating plates according to Blein. Cited by Fétis in the *Traité*, 215.

serve how the fundamental tone sounded by many of these vibrating plates (notated in octave displacement with a black note head) generates this tritone along with a number of other dissonant intervals.

Blein engaged in a volley of acrimonious essays and letters with Fétis concerning the question in several issues of *RM* published in 1832.<sup>16</sup> But as firm as Fétis was in trying to swat down Blein's ideas as poor science and even worse music theory, he was continually frustrated that theorists advocating acoustical origins for harmony kept popping up much as in that exasperating arcade game called Whac-A-Mole. Over the following decades, Fétis (or his surrogate, Eugene Troupenas<sup>17</sup>) found himself repeating the same arguments against the baleful fatalism of these acoustical theorists.<sup>18</sup>

There was one writer, however, who published a remarkable treatise toward the end of Fétis's life who could not be so easily dismissed. This was the great German physicist Herman Helmholtz, whose studies of musical acoustics and the physiology of the ear offered a profoundly new and serious perspective on musical tonality.<sup>19</sup> As it turns out, Helmholtz was also a reader of Fétis, and we find evidence in his own treatise of Fétis's influence. Helmholtz's claims seemed to mediate the "fatalism" of musical acoustics against which Fétis had long railed and the more metaphysical liberalism by which humans could organize their own notions of tonality. While his studies of harmonic resonance gave an unimpeachable explanation for our sense of consonance and dissonance in harmony, Helmholtz was careful to explain that it by no means dictated what musical choices we might make in terms of how we organize notes into tonal systems.

The system of Scales, Modes, and Harmonic tissues does not rest solely upon inalterable natural laws, but is also, at least partly, the result of

esthetical principles which have already changed, and will still further change, with the progressive development of humanity.<sup>20</sup>

As Helmholtz (and his English translator, Alexander Ellis) analyzed differing scales systems, whether those used historically in the West or by musicians in distant countries and cultures, we can see further telltale signs of Fétis. Helmholtz cites the *Résumé philosophique* at several points with approval, emphasizing the importance of Fétis's idea of tonality:

This predominance of the tonic, as the link which connects all the tones of a piece, we may, with Fétis, term the principle of tonality. This learned musician has properly drawn attention to the fact that tonality is developed in very different degrees and manners in the melodies of different nations. (Helmholtz, 240)

His conclusion was a rousing endorsement of Fétis's Kantian liberalism and a cautionary warning of overextending the claims of science in the area of the arts:

But scientifically, when we proceed to explain its construction and display its consistency we must not forget that our modern system was not developed from a natural necessity, but from a freely chosen principle of style; that beside it, and before it, other tonal systems have been developed from other principles, and that in each such system the highest pitch of artistic beauty has been reached, by the successful solution of more limited problems. (249)

The reception of Helmholtz's work in France is a fascinating story that deserves its own study.<sup>21</sup> But for Fétis, it was research that evidently came too late. While he owned copies of both the original German and French translation of *Die Lehre von den Tonempfindungen* (numbered 5845 and 5846 in his library catalog), there is no evidence he made use of either work.<sup>22</sup> No doubt, though, if he had read through them, he would have been pleased to see his work cited with approval by such an eminent German scientist. For if there was one country in which he most desired to see his theoretical writings be accepted, it was Germany. (He would repeatedly express frustration about the lack of interest shown in his writings among German scholars, not to mention the lack of interest in translating any of his works.)<sup>23</sup>

## 2. "SYSTEMS BASED ON ARITHMETIC PROGRESSIONS AND THE CHROMATIC SCALE"

In this second chapter of his fourth book of the *Traité*, Fétis takes aim at theorists who invoked a reciprocal arithmetic series to complement the more traditionally used harmonic series in order to generate the diatonic scale as well as all the various chromatic tones of the gamut. The value of the arithmetic series for this purpose is clear enough. As the French theorist Charles Levens already pointed out in his treatise of 1743, the harmonic series was incapable of generating the crucial fourth scale degree of the major scale (see ex. 6.2).<sup>24</sup> In the arithmetic series, though, the fourth scale degree can be easily found as the "lower" perfect twelfth of the series. At the same time, the series affords a tempting means for establishing the minor triad, a maneuver that will later become familiar in the work of German harmonic dualists. (The inverse of the harmonic triad,  $\begin{smallmatrix} G \\ E \\ C \end{smallmatrix}$ , produces, as is well known, the descending "arithmetic" minor triad,  $\begin{smallmatrix} C \\ A^b \\ F \end{smallmatrix}$ .)

Fétis, as we can imagine, rejects this school of tonal generation, which he says included minor French theorists such as Baillère and Jamard as well as the Italians Vallotti and Sabbatini and finally a few Germans, including Sorge and Vogler.<sup>25</sup> His objection to the series was much the same as his objection to the harmonic (overtone) series; virtually all of the intervals generated by the series, particularly in the higher (or lower) octaves, are unusable in any tempered tonal system.

The main defects of this system, defects that make it crumble at its foundation, are, on the one hand, that it does not correspond to the constitution of any tonality, and, on the other hand, that the proportions of the intervals do not correspond in the various octaves and whose false sensations consequently irritate the ear. (*Esquisse*, 96; translation slightly modified)

It must be said that Fétis does not do real justice to any of these theorists by reducing them en masse to a uniform group of paleo-dualists.<sup>26</sup> Still, it is clear why their work would so irritate Fétis, given how each of them indulges in cutting, transposing, and then pasting together bits and pieces of a "natural" horn series in order to build the various scales and chords in which they were interested.

Particularly annoying to Fétis was the penchant of these theorists—but especially Vallotti and the "School of Padua"—to produce varieties of added-note chords (ninth, eleventh, and even thirteenth) through this method

UT	UT	SOL	UT	MI	SOL	SI bémol	UT	RE	MI
1	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{1}{6}$	$\frac{1}{7}$	$\frac{1}{8}$	$\frac{1}{9}$	$\frac{1}{10}$
	OCTAVE	QUINTE	QUARTE	TERCE MAJEURE	TERCE MINEURE	TERCE MINEURE	TON MAJEUR	TON MINOR	TON MINOR
1	2	3	4	5	6	7	8	9	10
UT	UT	FA	UT	LA bémol	FA	RE	UT	SI bémol	LA bémol

Example 6.2. Harmonic and arithmetic progressions. *BU*<sup>1</sup>, 6:130, s.v. "Levens."

of pasting thirds together, and further, allowing them each to be inverted. "These harmonies," he chides,

so harsh, so incapable of proper resolution, were not conceived by a learned musician raised in purer principles as much as by one guided by a systematic spirit and who did not understand the mechanism of prolongation by which the natural intervals of chords are suspended. (*Traité*, 224)

But even worse than this was the move by the Abbé Vogler and his school (including Schneider and Jelensperger) to place such monstrous chords on every degree of the diatonic scale, thereby undermining any possible sense of tonality. "Such a theory," he despairs,

is the negation of any true theory, for it reduces the art and science [of music] to a collection of absurd facts, without connection, and opposed to any sensitivity to delicate harmony. The laws of harmonic creation are destroyed in this maze of diverse chords. (*Traité*, 227)

We will see further below Fétis's own illustration of these compounded chords as being the result of either suspension or substitution.

Amid all this debris, there is one moment of insight offered by one of these theorists that Fétis stops to single out for praise. This is Georg Andreas Sorge's recognition that some seventh chords can be employed without a preparation of the dissonant seventh. Sorge's comments on the unprepared seventh occurs in the third book of his *Vorgemach der musicalischen Composition* of 1747. Nonetheless, Fétis deems this a momentous advance in the development of tonal awareness given how it ratifies the intuitive step Monteverdi had first taken over a century earlier. It is true, Fétis goes on to lament, that Sorge did not realize that his statement really only applied to the dominant seventh chord. Still, it was a general insight for which "he deserves a place in the history of the science of harmony immediately after Rameau." Fétis can scarcely disguise his amazement:

Note this well, for we have arrived at one of the most important events in the history of harmony; it is the second period of real discovery made in this science, and the glory for this discovery belongs to the humble organist of Lobenstein, neglected by all historians of music until this day. For the first time, he established that a dissonant chord exists by itself, apart from any modification by another harmony. (*Traité*, 218; *Treatise*, 214)

Were Fétis as careful a reader of the historical literature as he claimed he was, he would have seen that Sorge developed this idea far more thoroughly than Fétis gives him credit.<sup>27</sup> He would have also noted that there was a long lineage of theorists in the eighteenth century who voiced similar views. Beyond Sorge, one can find surprisingly elaborated theories of harmony in which unprepared dissonant harmonies are licensed in treatises by Sabbitini and Türk. In his own backyard, both Catel and Choron also made ample allowance for the use of unprepared dissonances.<sup>28</sup> And as we noted in chapter 1, it was long a part of partimento practice (see p. 284n38).

### 3. "SYSTEMS BASED ON AN ARBITRARY CHOICE OF FUNDAMENTAL CHORDS"

If the previous two categories of theory revealed the futility of looking for a "natural" basis for tonality in acoustical phenomena or arithmetic progressions, the next two categories of theorizing that Fétis considers err by going to the opposite extreme. Theorists in this camp seem to reject any systematic basis for tonality and instead rely on the arbitrary amalgamation of empirical observations. This is no less of a mistake in Fétis's view, and indeed, perhaps even a more serious mistake, in that the construction of a theory becomes a purely ad hoc enterprise, as if there is no logic behind the various systems of harmony that have governed musical progress over the centuries. Such is the case of those theorists who posit an arbitrary number of fundamental chords as the basis of their harmonic systems.

Perhaps the most blatant example of this (though it is not the example with which Fétis begins his chapter) is found in the writings of his former colleague and rival at the Conservatoire, Anton Reicha. In his *Cours de composition musicale* from 1816, Reicha posits thirteen different chords as being "fundamental" to his harmonic system. These range from four triads (major, minor, diminished, and augmented) and four seventh chords (dominant seventh, minor seventh, half-diminished seventh, and major seventh) to two kinds of ninths chords (major ninth and minor ninth), two types of aug-



Example 6.3. Reicha's thirteen "fundamental chords," reproduced in Fétis, *Traité*, 239.

mented sixth chords ("German" and "French"), and an augmented triad with added seventh. All of these fundamental chords are shown in example 6.3.

Fétis spends several pages in the *Traité* detailing the problems with Reicha's classification, both logical and musical. (This is one of the few places where Fétis actually expands the discussion given in his *Esquisse*.) He finds it remarkable that someone with training in philosophy, law, and mathematics could produce such a confusing and contradictory system. Reicha's theory of harmony, Fétis chides, "is a conception of the least rational theory that could possibly be imagined, and the most deplorable return towards the crude empiricism of the old methods of the early eighteenth century" (*Traité*, 242; *Treatise*, 240).

While Fétis finds the reasoning behind this particular selection and ordering of chords infuriatingly inconsistent (e.g., he mixes both consonant and dissonant chords without attempting to distinguish the two), it is the deafness to tonality that he finds most stunning. As with any other system in which chords are generated in isolation or otherwise analyzed abstractly, there is no possibility of understanding the real tonal basis of these harmonies. The fact that most of them are built on the same fundamental note of G underscores for Fétis how severed these chords were from any musical consideration. What is important in a theory of harmony, he insists once again, is how chords arise and are used within a tonal context, which is to say, above a given scale degree. Nothing was more unmusical than those theorists who would mechanically assign triads and seventh chords above every scale degree and give those chords ontological status by assigning them each a roman numeral.

So to take one example, the minor seventh chord that Reicha claims is "used mainly on the second degree of a major scale" is categorized as a "second order seventh" after the "first order" dominant seventh chord. (This is numbered 6 in ex. 6.3.) But in considering the seventh on the supertonic a fundamental harmony, Reicha hits "the eternal stumbling block of all false harmonic systems" (*Esquisse*, 62). Theorists from Sorge and Kirnberger to

DES ACCORDS. 85

**GAMMES DIATONIQUES**

ACCOMPAGNÉES PAR LES ACCORDS NATURELS.

Example 6.4. “Natural chords” of the major scale. *Traité*, 85.

Schröter and Catel had made the same mistake in thinking that this minor seventh was an independent harmony when in fact it is merely a result of “substitution” and “prolongation.”

It will be worth our time to pause here a moment to understand Fétis’s argument, as it will prove crucial to his general theory of tonality. We have heard him say repeatedly how “modern tonality” is constituted through the appellative power of the dominant seventh chord, or more precisely, the appellative notes of scale degrees four and seven in a major mode coupled with the dominant note. No other seventh chord had the tonal-defining power of this harmony. While diatonic seventh chords on scale degrees  $\hat{2}$ ,  $\hat{3}$ , and  $\hat{6}$  might seem to mimic the cadential progression of the authentic dominant seventh cadence (and indeed, Rameau had labeled them species of dominants for precisely this reason), Fétis insists they are not seventh chords at all, being harmonies that are actually derived from “natural” sixth chords as the result of prolongation and substitution.

Here we can clearly see the unmistakable legacy of the partimento tradition in Fétis’s own theory of harmony. When Fétis speaks of “natural” chords, he is clearly referencing the *règle de l’octave*. In the classical version of the *règle*, each scale degree is defined by (and reciprocally supports) a specific diatonic harmony. (But even the standard *règle* is not entirely natural, in that it typically brings in an “altered” chromatic sixth when descending on scale degree  $\hat{6}$ , e.g., A–C–F $\sharp$  in the key of C major.) The purely “natural” version of the scale is shown by Fétis in example 6.4.

Note how  $\frac{5}{3}$  triads are found only on the tonic and dominant notes (and  $\hat{6}$  descending), while all other scale degrees support some variety of a sixth chord. Simple  $\frac{6}{3}$  chords are found on scale degrees  $\hat{3}$ ,  $\hat{4}$ , and  $\hat{6}$  ascending and  $\hat{7}$  descending; the remaining scale degrees use some inversion of the dominant seventh chord ( $\hat{2}$  and  $\hat{7}$  ascending,  $\hat{4}$  and  $\hat{2}$  descending). As part of the domi-

The image displays three systems of musical notation for piano accompaniment. The first system, titled "Harmonie naturelle.", shows a sequence of chords in a minor mode, primarily using triads and dyads. The second system, titled "Harmonie retardée.", shows a similar sequence but with notes from the previous chord held over, creating a dissonant suspension. The third system continues this progression, showing how the dissonant notes eventually resolve.

Example 6.5. Suspensions “prolonging” the natural harmonies in a minor mode. *Traité*, 76–77.

nant seventh harmony, the dissonant F need not be prepared on any of these notes in accordance with the laws of modern tonality. Note carefully that Fétis excludes triads on the second and third scale degrees in major, as these are “dissonant” against the natural harmonies that should normally appear above them. (Scale degree  $\hat{6}$  is something of an exception in that it can sometimes support a consonant triad, as here.)<sup>29</sup>

Tonal variety is attained, as mentioned, by invoking venerable techniques of contrapuntal elaboration (or “modifications”) that are again a standard part of partimento training for a keyboardist. The most important of these modifications is that of “prolongation,” by which Fétis (and his French predecessors) mean suspension or retardation. Through prolongation, it is possible to create a variety of dissonant chords. The dissonant tones in all these chords are prepared in the previous chord as a consonance, as we can see in example 6.5, which begins with a progression of natural harmonies in the minor mode.

But there are other modifications that composers may call upon to vary the natural harmonies of a progression. After the suspension, the two most important such modifications are substitution and alteration.<sup>30</sup> By invoking these, either singularly or in combination, it is possible for composers to create a variety of “artificial chords.” Such is the case of the dominant ninth chord, which results from the substitution of scale degree  $\hat{6}$  for the octave of the dominant seventh chord.<sup>31</sup> When we add a suspension (“prolongation”) to



1. Harmonie naturelle.    2. Substitution.    3. Prolongation.    4. Réunion de la substitution à la prolongation.

Example 6.6. Generation of an eleventh chord through substitution and prolongation. *Traité*, 77.

5. Harmonie naturelle.    6. Substitution.    7. Prolongation.    8. Substitution réunie à la prolongation.

Example 6.7. Generation of the “seventh” chord  $\hat{2}$  through substitution and prolongation. *Traité*, 78.

this substitution, we can create an “eleventh” chord, which is merely the retardation of the third of the dominant harmony. This entire process is illustrated in example 6.6.

Now we are in a position to understand why so many theorists before Fétis misunderstood the nature of the seventh chord on scale degree  $\hat{2}$ . As Fétis shows us in Example 6.7, the “D-minor seventh chord” in the key of C major is really but a derivative of the natural  $\frac{4}{3}$  chord that has been altered first by substitution (sounding A in place of G) and then prolongation (a C in the previous tonic chord suspended).

Thus previous attempts to generate and justify these chords as independent entities obscure their real tonal origins. It is not a surprise that “the joining of the two kinds of modification in natural dissonant chords not having been perceived by harmonists, the artificial chords that result from them have plagued authors of a multitude of systems on the science of harmony.”<sup>32</sup> By additionally considering the modification of chromatic “alteration,” it is possible to generate—as did Rameau—diminished seventh and augmented sixth chords.<sup>33</sup> In all cases, the most complex and chromatic harmonies should be able to be traced back to—and conversely, generated from—diatonic “natural” harmonies.

This is why the attempts of so many theorists to identify a small number of primary or fundamental harmonies so often go awry. Daube, who posited (after Rameau) that there were three primary harmonies in any key—a consonant tonic triad, a  $\frac{6}{4}$  chord on the fourth scale degree, and the dominant

seventh—failed to recognize how his second  $\frac{6}{5}$  chord, like that of the minor seventh of which it is an inversion, is derivative (*Traité*, 230). Two theorists from the later eighteenth century, Kirnberger and Schröter, showed far more tonal sensibility in recognizing only two fundamental chords in their systems—the consonant tonic and the dominant seventh chord—as well as the possibility of retarding individual voices in these chords and their inversions through suspensions (*Verzögerungen*). But Schröter got dreadfully off track by thinking that the seventh of the supertonic chord was itself merely a displacement of the octave (*Traité*, 231–33). Kirnberger, on the other hand, was correct in noting that the seventh of the chord represented an “inessential” or “accidental” dissonance that suspends the sixth to which it resolves; but he did not understand the notion of substitution by which the addition of a fifth above  $\hat{2}$  could be explained in the same chord.<sup>34</sup> After Kirnberger, theorists seemed to slip back to the arbitrary empiricism that we saw with Reicha; harmony pedagogues such as Langlé, Schicht, Weber, and Derode (the latter theorist we might remember from chapter 1 as being the one to wake Fétis up from his dogmatic slumber) all continued to analyze and classify chords detached from any tonal context and thus were incapable of understanding their real origins (*Traité*, 233–39). Even Fétis’s mentor Alexandre Choron was never able to come to any clear understanding of harmony since his many writings on the topic show his opinions were in “incessant fluctuation.” Alas, Fétis concludes, “Doubt tormented his mind with respect to the existence of a complete and rational harmonic system, and his works are, in a way, forgotten in the history of this science.”<sup>35</sup> Only Catel continued to make a strong distinction between natural and artificial harmonies, although Fétis quickly added that his method still suffered from many deficiencies. (We will look at Catel’s ideas more closely later in this chapter.)

It is worth reiterating here how closely Fétis’s conception of harmonic elaboration is to the partimento pedagogies of the Italians that he evidently picked up from Choron and his teachers at the Conservatoire. In classical partimento tutors such as those authored by Fenarolli, a student would work through a series of figured (and often unfigured) bass progressions in successive stages of difficulty and elaboration.<sup>36</sup> There was very little theory of any speculative kind in this process. Students would simply learn—ideally under the tutelage of a master hovering over their shoulders—to play these progressions fluently, learning in the process how to elaborate such basic progressions as the perfect cadence or the rule of the octave in ever more sophisticated manners by applying techniques of (among others) suspension, substitution, and chromatic alteration as well as varying the textures and style of the progression. Along the way, the student also learns to play these pro-

gressions in major and minor modes and in transpositions to different keys. Many of the examples from Fétis we have looked at above (and a few more to be shown later) might well be seen as idealized (if somewhat abstracted) steps of elaboration that a partimento student would follow when seated at a keyboard. Presumably, too, that same student would progress from the simpler progressions of “transitonic” music to the more ambitiously chromatic music of the “pluritonic” and even “omnitonic” orders. (Example 7.4 in the next chapter illustrates what some “omnitonic” elaborations of a simple cadential progression might look like.)

To be sure, Fétis at times invoke some newer music-theoretical ideas to help simplify or explain this practice, above all, the widely accepted invocation of inversion to group certain harmonies (though even here, it was never a particularly important element of his teaching). What is far more remarkable to notice in his *Traité* is what he did not bring in: there is no interest in “generating” harmonies using either mathematical or acoustical means, of identifying and prioritizing chordal roots, harmonic functions, or hierarchies of consonance and dissonance. Above all, there is no use of Rameau’s fundamental bass. (The fundamental bass, Fétis would repeatedly argue, is only useful at most as a means of “verifying” a harmonic succession, though tellingly, there is no example I have found anywhere in his writings in which Fétis does this.) The real “theory” that Fétis brings to partimento practice, as we have seen, is one that attempts to explain the origin and nature of the major and minor scales on which the “natural” harmonies of modern tonality are based. Too many theorists, Fétis repeatedly complains, become obsessed with chords detached from this natural basis and thereby are incapable of appreciating the true nature of tonality. We might well say, then, that Fétis’s *Traité* is one of the most important continuations of the partimento perspective of harmony to be found anywhere in the whole nineteenth century even if it lacks its more systematic pedagogy.<sup>37</sup>

### Beethoven Nods (A Short Excursus)

It is not just theorists who failed to understand the laws of tonality by which harmonies originate. Great composers, as with Homer, may also sometimes nod. In a number of places in his *Traité*, Fétis dares to point out passages of music where Monteverdi, Beethoven, and Mozart grossly violated tonal sensibilities. The controversy Fétis caused when he criticized the opening of Mozart’s “Dissonance” String Quartet K. 465 in 1829 gives us a preview of his approach.<sup>38</sup> Fétis judged the grating dissonances caused by the entrance

The image shows a musical score for two woodwind parts: Flûte et hautbois (top staff) and Clarinettes (bottom staff). The music is in 3/4 time and features a complex rhythmic pattern with many sixteenth and thirty-second notes. In the Clarinettes part, an asterisk (\*) is placed above a chord in the second measure of the second system, highlighting a specific harmonic clash.

Example 6.8. Harmonic clashes in Beethoven's Fifth Symphony, second movement. *Traité*, 49.

of the first violin in the opening measures of the first movement as obviously “faulty.” Not believing that Mozart could possibly have meant what was printed in the score, Fétis took it on himself to offer a “correction” by re-composing the opening Adagio of the quartet, a gesture that quickly earned a strong rebuke from a reader in Germany.<sup>39</sup>

Another notorious case (notorious because it was one for which Berlioz would mercilessly and continuously mock Fétis) concerned a passage in the slow movement of Beethoven's Fifth Symphony. The passage in question is shown below in Fétis's own reduction as example 6.8. The chord in question is a leading tone (half-diminished)  $\frac{4}{3}$  chord in Eb major. (It is marked with an asterisk in the example.) In this case, the seventh C is really a “melodic accent” created by the substitution of C for the true Bb of a dominant  $\frac{+4}{2}$  chord (Ab–Bb–D–F). Such a substitution, Fétis insists, must always remain in the upper voice of the chord “at the distance of a seventh from the leading tone” (*Traité*, 48; *Treatise*, 49). Thus, when Beethoven employs this chord in an “inversion” as indicated by the asterisk, the major second clash between the resulting D and C creates a “most disagreeable sensation” of repulsion. In fact, the disagreeable sensation was so palpable that when the symphony was first performed in Paris at a concert at the conservatory, Fétis reports that “artists and amateurs looked at each other with astonishment, in a kind of stupor” even if they were not entirely aware of the cause.<sup>40</sup>

There were two other places in the *Traité* where Fétis also points out mistakes by Beethoven, both of which involve pedal tones. One was from the same slow movement of the Fifth Symphony, where the composer sustains

an Eb5 in the clarinet that is sounded above the Ab tonic of the main cello theme, which then becomes a dissonant ninth against a change of harmony to a  $\frac{6}{3}$  chord over Db in the lower strings (marked by an asterisk in ex. 6.9). But Beethoven fails to resolve the Eb as we would expect. On the contrary, he holds the dissonant Eb for two measures until it rises unexpectedly to an E $\natural$  in the ensuing measure, thus creating a “painful sensation” for the listener (*Traité*, 130; *Treatise*, 127).

The other “mistake” of Beethoven pointed out by Fétis is found in a formal retransition in the final movement of the Pastoral Symphony, where Beethoven places an F-major pedal below a sounding C major harmony being outlined in the upper winds and horns. (See ex. 6.10; this passage can be found between bars 109 and 117.) Once again, he reports that listeners in Paris received this passage with “astonishment, hesitation, and a kind of painful feeling.”<sup>41</sup>

So egregious did Fétis find these passages of music that his first thought was that they could not possibly have been written by Beethoven but must have some other origin. When Fétis had the chance to edit editions of two of Beethoven’s symphonies for Troupenas in 1829, he concluded that the culprit (at least in regard to the notorious clarinet Eb in the Fifth Symphony) must be a printer’s mistake, and he proceeded to note this in the page proofs he looked at. (Fétis thought Beethoven surely intended for the Eb to move upward to an F above the Db.) But in other cases, it seems Beethoven’s judgment proved fallible. While the clash of keys in the Sixth Symphony may well have been intended by Beethoven as a pastoral soundtrack (Fétis imagined a shepherd playing a bagpipe against which is heard a distant alpine horn call), it is not art.

The latter can only completely satisfy the mind elevated to its highest aesthetic development by resting on its principal foundation, which in music is none other but tonality, that is to say, the general law of the relations of sounds. (*Traité*, 124; *Treatise*, 122)

Now it is easy enough for us today to mock our editor for his narrow-minded pedantry. Berlioz, who happened to be working for Troupenas as a copy editor at precisely this point, could scarcely contain himself when he first encountered Fétis’s corrections.

What! Bring out a French edition of the greatest instrumental works the human mind has ever created and emasculate them, make Beethoven submit to corrections like a student in a harmony class, because the pub-

N<sup>o</sup> 4.

Clarinette .  
Violons  
Pizzicos.  
Alto et Violoncelle.  
Contrebasse.

Example 6.9. An incorrectly resolved dissonance in Beethoven's Fifth Symphony, second movement. *Traité*, 131.

N<sup>o</sup> 4.

Clarinette.  
Violons.  
Alto.  
Cor

Example 6.10. A "disagreeable" tonal clash in the fifth movement of Beethoven's Sixth Symphony. *Traité*, 125.

lisher has had the idea of recruiting a self-opinionated professor no more capable of advancing beyond the narrow circle of his own theories than a caged squirrel on a treadmill? It is damn well not going to happen!<sup>42</sup>

Fétis actually had his reasons for thinking that Beethoven's command of harmony and part writing might not be as secure as his devotees assumed. Here is the story. In 1832, Ignaz von Seyfried published a work that ostensibly

contained Beethoven's notes on harmony, thoroughbass, and counterpoint that he had jotted down while a student of Albrechtsberger.<sup>43</sup> (Seyfried was also a student of Albrechtsberger.) Fétis became immediately excited about this work, revealing as it must the path by which the great composer began to master the craft of musical composition. He thus decided to undertake a full French translation of Seyfried's *Studien* himself—the only case, incidentally, in which he paused from his own writings to translate the full book of another author. But as he worked through the “treatise,” he became increasingly perturbed by the many mistakes of notation, misanalysed harmonies, errors in counterpoint, and other infelicities that could be found throughout the musical examples. When he finally finished his translation for publication in 1833, Fétis had peppered the text with his own footnotes chastising the young student for his numerous mistakes.<sup>44</sup> For example, a false resolution of a third inversion dominant seventh chord ( $\frac{6}{2}$ ) is accompanied by this tart comment: “One sees here the origin of mistakes [*incorrections*] that one may observe in the compositions of Beethoven. The mistakes are not, as one can see in this example, the result of negligence, rather of a false theory that he had been taught” (1:19). Subsequent faults in other harmonic progressions are called out as “absolutely intolerable” (1:21), “a grave error” (1:104), “absolutely useless” (1:46), and even “injurious to the ear” (1:38).

Unbeknown to Fétis, though, the book was an easy target for criticism. Gustav Nottebohm showed that Seyfried's edition, though supposedly based on extant notes and exercises by the young Beethoven, was more a concoction of “falsifications” than any authentic reflection of the composer's pedagogical training.<sup>45</sup> But Fétis had no notion of that. In his view, these student notes with all their errors reflected the poor training Beethoven received at the hands of Albrechtsberger.<sup>46</sup> Fétis's reliance on this fabrication obviously prejudiced his own judgement of Beethoven's understanding of harmony, giving him greater courage to dare criticize and even correct the master.<sup>47</sup> In any case, whether it was through poor instruction or simply a lapse of good musical judgement, Berlioz be damned! Who else is there better to evaluate a musical score than one who has devoted his life to the study of both the historical and theoretical nature of the tonal language in which Beethoven composed? Fétis, as we have seen, was not going to be easily cowed by his adversaries.

#### 4. "SYSTEMS BASED ON AN ARBITRARY DIVISION OF THE MONOCHORD"

In this final and shortest chapter of the fourth book, Fétis turns to the important treatise of Charles-Simon Catel, Fétis's erstwhile teacher and mentor. Catel's *Traité de l'harmonie* earned fame by being adopted by the newly-founded Conservatoire in 1802; it was presumably the text Fétis himself used as a young conservatory student and from which he was later obliged to teach.<sup>48</sup> As we will see, Catel's treatise anticipates many arguments Fétis would be making several decades later, though of course without him giving much credit to his old teacher.

In his treatise, Catel begins by employing a monochord to plot out harmonic divisions up to the seventeenth aliquot division of the string.<sup>49</sup> Fétis calls Catel's monochord division "arbitrary" in that many of the harmonies he wishes to teach are arbitrarily drawn from these various string divisions. (There is also the inconvenience that the resulting pitches do not sound precisely as they are notated on the staff.) But Catel's aim was not so much theoretical rigor as it was pedagogical ease. Within the first nine notes of the harmonic series, Catel is able to extract a "dominant ninth" chord on the fundamental G that embeds within itself the most important harmonies a student will need to learn: three triads (G-B-D, D-F-A, and B-D-F) and two seventh chords (G-B-D-F and B-D-F-A). By adding notes of the third octave up to the seventeenth division, it is possible to find additional harmonies, such as the diminished seventh chord (B-D-F-A $\flat$ ).

As we might suspect, for Fétis, Catel's procedure proved completely unsuitable to be a viable basis of any systematic theory (though perhaps for that reason it proved congenial and accessible to students of the Conservatoire). It failed, above all, to recognize the origin of all chords in the natural harmonies above the diatonic scale. Catel's casual derivation of his chord types from the dominant ninth chord thus violated one of the most fundamental properties of tonality. What salvages Catel's work for Fétis is the recognition he gives the importance of prolongation and alteration to the elaboration and derivation of chords in his theory. Having looked at some of Fétis's own voice-leading pedagogy above, we can now see where he got some of his ideas even if he once again tried to cover his tracks.

Example 6.11 shows a typical example from Catel's treatise. (It will be instructive to contrast this example with one of Fétis's similar examples discussed earlier, such as examples 6.6 and 6.7.) A basic three-bar progression of "natural harmonies" is given that employs a "first-inversion" D-minor seventh chord in the second measure.<sup>50</sup> Catel shows first how the dissonant



Example 6.11. Various chromatic alterations of a three-chord diatonic progression illustrated in Catel, *Traité de l'harmonie*, 61.

C of the chord can be prepared in the preceding (first) C-major triad and then “prolonged” into the final  $\frac{6}{4}$  over the dominant. (Oddly, he does not feel it necessary to show the resolution of the  $\frac{6}{4}$  chord.) Step-by-step, Catel adds successive chromatic alterations to this progression, thereby creating (what we today would call) a secondary dominant  $\frac{6}{3}$  chord, an added-sixth chord  $\frac{6}{3}$ , a fully diminished applied seventh chord, a “French” augmented sixth chord, and finally a “German” augmented sixth chord.

Fétis found much to approve in Catel’s pedagogy even as he would criticize many of its fundamental premises.<sup>51</sup> For example, we can well understand by now why Fétis would have objected to Catel calling the first  $\frac{6}{4}$  chord in example 6.10 an inversion of the natural dominant seventh chord on scale degree  $\hat{2}$ . According to Fétis, Catel was obviously ignorant of the notion of “substitution” by which this chord was generated. Still, if Catel was not always able to discern which harmonies were originally natural in his theory, he at least displayed a remarkable instinct for tonality by recognizing that most chromatic (or “artificial”) chords could be derived using a small number of operations on a basic vocabulary of diatonic harmony.<sup>52</sup> The same could hardly be said of another theorist Fétis turns to after his discussion of Catel:

Jérôme-Joseph de Momigny. While Momigny posits a monochord division that was just as arbitrary as that of Catel for the basis of his theory, the resulting derivations he draws from it prove that he had “only confused notions about harmonic practice” (*Traité*, 247; *Treatise*, 246). What ideas there may have been of value in his writings stem only from the ideas lifted from other theorists.

With this curt dismissal of Momigny, Fétis comes to the end of his critical survey of “historical systems” of harmonic theory. As he reflected on the desolate landscape he had just surveyed, Fétis found little consolation. He had shown that the writings of the majority of his predecessors were marred on the one hand by their obsession to ground harmony in monochord divisions or in acoustical resonance, or on the other hand by throwing their hands up and reverting to an unsystematic and capricious empiricism. While there were moments of insight to be celebrated in the writings of Rameau, Sorge, Schröter, Kirnberger, and Catel, no theorist before Fétis was able to provide a satisfactory answer to the question, “Qu’est-ce que la tonalité?” (What is tonality?). This was a question, of course, that Fétis was convinced he had uniquely and correctly answered with his own theory of harmony, leading him, at the conclusion of his own treatise, to declare with brazen self-confidence,

Having arrived at this point, the theory of harmony is at the concluding stage of art and science; it is complete, and nothing can be added to it. It is this theory that I have developed in this work. Rameau, Sorge, Schröter, Kirnberger, and Catel had in turn found the first elements, and I completed it, by placing it upon the unshakeable foundation of tonality. What unassailably proves its excellence is that it is at once the history of the progress of the art, and the best analysis of the elements manifested therein. (*Traité*, 254; *Treatise*, 253; translation slightly modified)

It probably is not necessary to remind ourselves once again that Fétis’s breezy romp through this literature was scattershot, to put it charitably. Too many of his thumbnail assessments of so many theorists were partial, inaccurate, and be it said, disingenuous. What is perhaps most startling, however, are those topics directly relevant to his theory of tonality that are completely absent from his analysis. Surely some of the most egregious omissions are seen in the way Fétis disposes of Rameau’s massive corpus of theoretical writings in a few pages, only bothering to cite his first treatise, the *Traité de l’harmonie* (1722), and even then only touching on a few of the many arguments there.

While there are many examples to choose from, certainly one of the most important theoretical ideas from Rameau's writings about which Fétis seemed to have little to say was that of the "triple geometric progression." It is particularly relevant to this present study in that the triple progression offered one of the most compelling universalist arguments for an a priori generative basis for the diatonic scale in direct opposition to Fétis's claims. Although the idea of this progression was taken up and developed by several generations of French music theorists over the course of the long nineteenth century, it is a story not well known today and worth relating here briefly.

### THE TRIPLE GEOMETRIC PROGRESSION: A SHORT HISTORY

Rameau first described the geometric progression in his *Nouveau système de musique théorique et pratique* of 1727. It was an idea, it seems, first suggested to him by the Jesuit scientist Pierre Louis Castel in a review of the *Traité* that he published in 1722.<sup>53</sup> The geometric progression, Rameau learned, was a numerical series that is expanded by a common multiple, or as Rameau defined it, "a series of terms that all have the same quotient."<sup>54</sup> The musical meaning of such a construct is most clear when the Pythagorean ratio of the perfect twelfth ( $\frac{1}{3}$ ) is successively multiplied by itself to create a continuous ascending "triple" progression of concatenated just fifths, such as 1 (C),  $\frac{1}{3}$  (G),  $\frac{1}{9}$  (D),  $\frac{1}{27}$  (A),  $\frac{1}{81}$  (E),  $\frac{1}{243}$  (B), and  $\frac{1}{729}$  (F#).<sup>55</sup>

But it was in his *Génération harmonique* of 1737 that Rameau attempted to plumb the full musical implications of the geometric progression. There he shows how the perfect fifth may be successively multiplied by both arithmetic and harmonic terms (3 and  $\frac{1}{3}$ , respectively) to create two cycles of just fifths: a descending "triple progression": 1 (C), 3 (F), 9 (Bb), 27 (Eb), 81 (Ab), 243 (Db), and 729 (Gb); and an ascending "subtriple progression": 1 (C),  $\frac{1}{3}$  (G),  $\frac{1}{9}$  (D),  $\frac{1}{27}$  (A),  $\frac{1}{81}$  (E),  $\frac{1}{243}$  (B), and  $\frac{1}{729}$  (F#).<sup>56</sup> We should keep in mind that these progressions are not related to the acoustical series of harmonic overtones generated by his *corps sonore*. While Rameau did consider elsewhere in the treatise the possibility of the *corps sonore* generating both an upper (harmonic) and a lower (arithmetic) series of partials, the triple geometric progression was a more abstract mathematical model that generated an idealized series of perfect fifths in both ascending and descending directions.

The lower series of perfect fifths mapped out by the geometric series proved useful to Rameau for justifying a new tonal function that he now singled out with a special name: the subdominant (*soudominant*) on scale degree  $\hat{4}$ , a perfect fifth below the tonic. With this new function, the tonic

could now be described by Rameau as a center function framed by two adjacent dominant chords. (The Newtonian rhetoric he used to describe this tonic chord as a kind of gravitational center around which these two satellite dominant functions were drawn was hardly an accident.) Together the three chords ( $3-1-\frac{1}{3}$  or F-C-G) represent the three most important harmonic functions of tonal music and ones that he felt were sufficient to constitute a given key.

By linking so closely his triple geometric progression with his notion of key and mode, Rameau seemed to have brilliantly extended the generative power of his *corps sonore* beyond the mere sounding of harmonies. The triple progression of fifths was attractive for Rameau in that it seemed to mimic the basic motion of the fundamental bass. In concatenating chords by perfect fifths, Rameau was able to produce most of the various melodic intervals characteristic of tonal music: the major and minor whole tones as well as the major semitone. (A related "quintuple geometric" series of concatenated thirds in the fundamental bass produced various chromatic and enharmonic intervals.) Rameau became convinced through this exercise that the triple progression of fifths was the principle behind all the most important scale systems found in history. For example, the classical Greek diatonic tetrachord (such as B, C, D, E) could be easily generated by a double succession of dominant and tonic fundamentals (thus a fundamental bass of G, C, G, C). A fundamental-bass of concatenated perfect fifths drawn from the triple progression (C, F, C, G, C), could generate the "Chinese" five-note scale: G, A, C, D, E. It was just a matter of extension, then, to harmonize the major diatonic scale of the West using the triple progression. Unfortunately, this last task proved not to be so easy. In order to generate a complete seven-note scale in correct order, it turned out Rameau had to either extend the fundamental bass progression beyond the three primary functions or include fundamental-bass motions other than that of the perfect fifth. In both his *Génération harmonique* as well as *Démonstration du principe de l'harmonie* of 1750, he tested a number of solutions to this quandary, but to no avail.<sup>57</sup> It was a circle that Rameau was never able to square in his theory.

Still, the fact that so many scale types could be produced using a small number of chords connected by perfect fifths in the fundamental bass, even with a few licenses, suggested to Rameau the triple progression of fifths must be an age-old, universal principle that was known even in antiquity by all civilized peoples to create their musical systems. How could this be? The answer, he thought, lay in Biblical history. The sacred knowledge of the triple progression must have been something God had already revealed to Adam. This knowledge was passed down over the generations to Noah. After the

great deluge, Noah must have passed this precious knowledge on to his sons, who were then dispersed to the various corners of the world.<sup>58</sup> But whether it was through Noah's kin or simply the fact that it could be deduced from the first two partials of the *corps sonore*, the triple progression was a marvelous principle of music even if had been forgotten over time. Alas, for Rameau, he was too old to develop his insight further. But it was not long before several disciples of Rameau picked up this notion and began to explore it in detail.

The first to do so was Abbe Pierre-Joseph Roussier (1716–90). Roussier was a key intermediary between Rameau and nineteenth-century developments in French harmonic theory. Early in his career, he proved to be a faithful student of Rameau's (or as much as one could be faithful considering Rameau's eclectic theory of harmony). More specifically, it was the fundamental bass that Roussier found compelling when he first started to read Rameau. He wrote several small treatises of harmony that attempted to synthesize and clarify Rameau's ideas, including the *Observations sur différens points d'harmonie* of 1755 and the *Traité des accords et de leur succession* of 1764. Both of these works presented the fundamental bass as the key principle of harmony, restoring music theory to a dignity and science that had been lacking for centuries.<sup>59</sup>

But already in these publications, we find Roussier attempting to steer Rameau's theory in new directions that Roussier would further explore in later publications. For one thing, he was a staunch critic of equal temperament, feeling this infernal system adopted by keyboardists destroyed the subtle enharmonic intervals that were such a source of powerful expression for the ancient Greeks. In fact, it was the music of the Greeks that began to obsess Roussier, and he now wondered whether the triple progression he read about in Rameau's writings might offer a key to ancient Greek music as well.

In one of those moments of revelation that seemed to be a part of the biography of every French writer in the Enlightenment, a profound new realization soon struck Roussier. While reading a late-classical dialogue, the *Timeaus Locris*, in which a series of perfect musical fifths modeled by a geometric expansion series (1, 3, 9, etc.) was described, Roussier recalled a report from the Jesuit missionary Pierre Joseph Marie Amiot that described a similar geometric progression used by the Chinese for their music. It dawned on Roussier that this geometric progression of fifths might well be the true origin and explanation of all scale systems, ancient and present. He devoted his energies to penning one of the most remarkable—and still little known—treatises of the eighteenth century to prove just this thesis.<sup>60</sup>

For Roussier, it is critical to note, the triple progression was significant

not as a generator of fundamental bass motion as with Rameau; rather, it was a generator of scales themselves. For this purpose, Roussier invoked a descending series of fifths that was infinitely extendable from a single generative source. He was certain that such a series should begin on a B $\sharp$ —the first note of the Greek tetrachord. (Roussier found support for the importance of B as the keynote of the scale and geometric series in an ancient bronze artifact he had read about, one in which the cycle of diatonic perfect fifths is mapped onto the seven days of the week and the seven planets of the ancient cosmos.<sup>61</sup>) A geometric progression of perfect fifths would then generate the following notes: B, E, A, D, G, C, F. These first seven notes of the series could then be reordered and regularized as a “Lydian” scale starting on F disposed by Pythagorean tuning (i.e., each whole step is a major tone [9:8], and each semitone is a leimma [256:243]).

The fascination with this extended geometric progression for Roussier was that it could account for all the notes of the Greek Greater Perfect System without recourse to some countergeometrical progression moving in the opposite direction or with any invocation of acoustical generation. In its Pythagorean simplicity, it seemed to be an elegantly parsimonious means for creating the basic diatonic scale of music, moreover, one that had the authority of ancient theorists. But there was no reason one must limit the musician to stop after just seven or even twelve notes. Roussier had calculated that a potentially useable scale could be made up of twenty-one notes from the series of fifths running from B $\sharp$  to F $\flat$ . (Roussier may have forgotten that Rameau had also extended the progression deeply into enharmonic territory—see p. 317n56.) This is a far richer resource for musicians, Roussier thought, than the mere dozen tones of our tempered chromatic scale. Yet it is a resource that musicians today scarcely can imagine, let alone apply in their music.<sup>62</sup>

But it was not practical music in which Roussier was most interested. His excitement about the triple geometric progression concerned its evident status as a universal principle of music. For we find that the progression of perfect fifths may generate not only the scales of the West but also of the Orient. The pentatonic scale of the Chinese, he pointed out, was nothing but a rearrangement of the first five notes of the triple geometric progression: B, E, A, D, G = B A G E D. (Unlike Rameau, Roussier believed the pentatonic scale—following Amiot—should be represented descending, not ascending.) This more than anything else convinced Roussier that the triple progression was a first principle of musical knowledge. Rameau’s mistake, he thought, was thinking of the diatonic scale being generated by the fundamental bass. But in fact (and obviously following Rousseau here), the scale is fundamen-

tally a melodic product, and only the triple progression is capable of generating this scale completely.

Roussier then touches on the puzzling question as to how the Greeks and Chinese both ended up basing their music on the same principle. The only plausible answer he could find was that both their scales must be descendants from an even earlier, more primeval source. And the most likely common source would be ancient Egypt. (Roussier rejected Rameau's suggestion that Noah must have been the fount of this knowledge as pure fantasy.) We have already heard this tale once before in chapter 5 as told by Villoteau. (And we now can see where Villoteau may well have derived this happy thought.) Ancient Egypt was the true cradle of all civilizations, bequeathing knowledge of all arts and sciences that have been wrongly attributed by prejudiced scholars as the inventions of the Greeks or Romans.<sup>63</sup> Ancient Egyptian priests, Roussier was convinced, must have discovered the secret of the triple geometric progression. Somewhere along the way, this hermetic knowledge was transmitted to the Orient as well as to Pythagoras in Greece.

It will not be a surprise for us to learn that Fétis found all of Roussier's reveries about his triple progression to be ludicrous. (It was in his discussion of Roussier's theory in the *Esquisse de l'histoire de l'harmonie* that Fétis directly critiqued the notion of the triple progression; he never associates it, however, with the theory of Rameau.) While acknowledging that the simplicity of Roussier's demonstration can be seductive, Fétis warns

These kinds of regularities . . . actually prove nothing in regard to the metaphysical affinities of sounds. This scale [Fétis refers to the "Lydian scale" on F that Roussier creates through the triple progression] will always shock the ear of a European musician because of the false relation between the fourth tone [B] and the first and the eighth tones [F].<sup>64</sup>

In any case, Fétis adds, the series can be of no musical use given how out of tune the notes become the further we travel into the progression. And the idea that one can find the principle of all arts and sciences in a numerical progression based on planetary systems and ancient calendars was beyond preposterous. After outlining Roussier's theory of the triple progression, Fétis asked his readers incredulously whether we are "to establish a real science or a useless hermetic theory? Are we musicians, or ought we to form a kind of gnostic sect, a new breed of illuminati?"<sup>65</sup>

As it turns out, Fétis's sarcastic question was more prescient than he could have imagined. Roussier's ideas did in fact seem to have inspired a

whole new generation of illuminati who continued to develop the notion of a geometric progression well into the nineteenth century. One such writer was Fabre d'Olivet (1767–1825), a particular notorious theosophist with a fascination for ancient history, music and occult knowledge. Like Roussier, d'Olivet was convinced that the wisdom of Pythagoras was shared with—and undoubtedly derived from—ancient Egyptian and Chinese sages. Pairing Roussier's chain of descending fifths from B with a second (ascending) series of fifths ascending from F, d'Olivet was able to resurrect the dualistic geometric progression of Rameau. These two progressions, he then announced, originated in a "universal empire" of ancient antiquity, one that he actually located in India and that was discovered by a Phoenician mystic by the name of Bharata.

It would be wearisome to detail further the incredible deductions d'Olivet's draws from this system of music.<sup>66</sup> Suffice it to say that it pushes occult speculation to a degree that had not been seen since the writings of Ficino in the fifteenth century. But it would be equaled in the following years by a bevy of French spiritualists and messianics, each who seemed to compete with one another in constructing evermore audacious systems of music influenced by strains of occult Pythagoreanism.<sup>67</sup>

Before moving past the reveries of these musical mystics, however, I cannot resist offering a few words on one of these writers whose own work had a special connection to Fétis's own theory of tonality and one whose own hubris and totalizing pretensions rivaled those of Fétis. This was "Count" Camille Durutte (1803–81). He was one of the oddest and at the same time theoretically tendentious of the speculative group of occultists seeking to build upon the triple progression.

Durutte first came to Fétis's attention innocuously enough as one of the many writers who claimed to find dominant seventh chords in music predating those Fétis cited from Monteverdi's fifth book of madrigals. (One of his examples was a madrigal of Gesualdo, "Moro e mentre sospiro," in which he found several instances of a dominant harmony with clear appellative qualities.<sup>68</sup>) But Durutte, as it turned out, was also a dedicated disciple of Hoene-Wroński, the Polish philosopher who had evidently been so influential a force in Fétis's idealist conversion that we heard about in chapter 1 (p. 14). He also absorbed some of Wroński's messianic vision of human knowledge and science and incorporated music to that vision as one of its key elements.<sup>69</sup>

We know of Wroński's musical philosophy mainly through the writings of Durutte, who reproduced and expounded on them in a remarkable 550-



page tome from 1855 titled *Esthétique musicale: Technie, ou lois générales du système harmonique par le Comte Camille Durutte, d'Ypres*. It would require another book to redact adequately the many incredible claims and dubious arguments in the Durutte-Wroński "absolute philosophy of music."<sup>70</sup> The book is full of impenetrable "proofs" that establish the "Supreme Law of Harmony," not to mention the "Law of Creation" or the "Genetic Table of the Absolute Philosophy of Geometry." But what concerns us here is the value Durutte and Wroński found in the venerable triple progression. It became the foundation of Durutte's "Generative Law of Chords." This law seems to be based on Rameau's double generation of upper and lower fifth progressions, though Rameau's name is never mentioned. Through a mixture of dubious mathematics and indecipherable equations mixed in with a good dose of mystical nonsense, Durutte-Wroński proceed to generate every imaginable chord combination using the series of Pythagorean fifths along with various scale systems and even musical rhythms. "This [triple] progression," Durutte wrote elsewhere, "is the genetic canon [*canon génétique*] of music, embracing in its generality the past and future of this art-science, of which the object is the corporification of intelligence in sounds following the profound definition given by the Slavic philosopher, Hoene Wronski."<sup>71</sup>

As we can easily imagine, Fétis had little good to say about Durutte and his book. He wrote a scathing entry for Durutte in the second edition of his *Biographie universelle*, lambasting his "false system" as utter "nonsense" and "twaddle" (*fadaise*). As both theory and philosophy, it was full of contradictions and erroneous arguments since it completely precludes the role of our psychological sentiments in constituting tonality. Durutte's (and Wroński's) reliance on the triple progression of fifths as a foundation for his various pompous laws and principles of universal science proves to be an imaginary basis, since the tuning of the progression results in a scale that is useless for a musician, and even then it is incomplete. (This is precisely the argument Fétis had earlier made against Roussier.) In concluding his article, Fétis's verdict was devastatingly blunt concerning Durutte's theory: "It suffices to explain it in order to reduce it to nothing" (*BU*<sup>2</sup>, 3:94). Durutte, we might note, did not take this criticism without putting up a fight. In a petulant brochure he issued in 1862, he did his best to rebut each of Fétis's arguments.<sup>72</sup> But if Durutte seemed to have lost this battle with Fétis, many of his ideas remained in circulation through the end of the nineteenth century.

Not all writers advocating for the triple progression of fifths were starry-eyed mystics like Roussier, d'Olivet, or Durutte; many were quite sober and respectable music theorists who used the geometric series of fifths as a foun-

dition for very practical textbooks of music harmony and tonality. One of the most important of these theorists was in fact Durutte's teacher, August Barbereau (1799–1879). We will look at his arguments in a moment. But first, some biography and an amusing story.

Barbereau was a composer who had studied at the conservatory during the early 1820s with Reicha. He must have had some talent, as he won the Prix de Rome in 1824. During his conservatory studies, Barbereau undoubtedly made contact with Fétis, who was teaching there at the same time. Indeed, one wonders whether Fétis influenced the young composer, since little by little, his own musical interests were drifting toward matters theoretical. But if Barbereau was inspired by Fétis's writings on tonality, he was not slavish to them; soon he was developing his own notions of tonality, which he began to teach to his students (including, as we mentioned, Durutte). By 1844, it seems Barbereau was getting ready to publish the first volume of a treatise on musical composition, one that he claimed would follow the "true laws" of tonality. So when he read that the great Fétis was returning from Brussels to deliver a series of lectures on tonality in 1844 (the same lectures with which I opened the first chapter), his interest must have been aroused. But the timing could not have been worse for Barbereau, as Fétis was himself also getting ready to issue his own treatise on harmony. Amusingly, advertisements for both publications appear on the same back page of an issue of the *RGM* (9, no. 9 [March 3, 1844]).

Barbereau thus must have showed up for Fétis's much-anticipated lectures with a great deal of consternation. And his fears were well founded. Over the course of the lectures, Barbereau heard his elder rival denounce in no uncertain terms all theories of harmony that relied on mathematical premises such as Roussier's triple progression. As we will see, this was just what Barbereau was planning to do in his own forthcoming treatise. What could he do in response?

Realizing that he simply could not remain silent, Barbereau showed up to the third lecture on February 25 with a list of seven "errors" in Fétis's theory of harmony that he felt undermined his rival's entire project. Standing up at the end of this lecture, Barbereau caused something of a stir by challenging Fétis to debate these arguments at some later time before a panel of twenty-four experts (twelve of whom he would select and twelve of whom Fétis could nominate) in order to settle the matter. Fétis not surprisingly declined this offer but invited Barbereau simply to enumerate his objections right then and there in front of the large audience.<sup>73</sup> According to Schlesinger, Barbereau sensed that he could not win in a forum so dominated by

partisans of Fétis, and he sank back into his seat in sulky silence. But he did publish his seven criticisms shortly thereafter in an article for a rival journal (*La France musicale*, March 3, 1844).

The seven objections are somewhat desultory, though all of them deal with various aspects of Fétis's theory of tonality, particularly the distinctions Fétis was making between plainchant tonality and modern tonality. Barbereau felt that these distinctions were not convincingly demonstrated. Beyond that, though, Fétis's own criteria for defining modern tonality were flawed. (For instance, Barbereau was sure that tonality could be established by means other than the dominant seventh chord, and Fétis's invocation of prolongation and substitution to generate many harmonies was far too clumsy and reductive, and his use of chromatic alterations was far too arbitrary.) Fétis eventually responded to Barbereau's objections, dispatching each one of them in short order.<sup>74</sup> But it was clear that he did not wish to waste further energy in debating the likes of Barbereau. Barbereau's own composition treatise finally came out the following year.<sup>75</sup> We are not surprised to find that many years later, when Fétis mentioned Barbereau's work in an entry in his *Biographie universelle*, he described it as "obscure, embarrassing, based on a false classification of harmonic observations, and overloaded with useless detail" (*BU*<sup>2</sup>, 1:242).

But it was in a second publication that came out in 1852 that Barbereau most directly offered a systematic alternative to Fétis's theory of tonality.<sup>76</sup> And it turns out that his alternative lay in the cycle of perfect fifths generated by a geometric triple progression. As with many of the other theorists we have just heard about who followed in Roussier's footsteps, Barbereau presents the triple progression as the key for understanding the origin and nature of the major diatonic scale. Through his systematic analysis of this geometric progression and its origins in the third partial of the harmonic overtone series, Barbereau believed he could explain a number of key problems of tonality, including why there are only seven notes in the diatonic scale, why they are dispositioned as they are with irregular spacings of whole and half steps, why only one pitch in the scale may serve as a tonic center, and the cause of the attractive quality of the leading tone. In short, Barbereau seems to have offered a full frontal assault on Fétis's very own theory of tonality by invoking arguments that were based on a musical series justified by acoustical and numerical factors.<sup>77</sup> Barbereau's new treatise roused the elderly Fétis to respond once again with a vehement rebuke of his adversary's pretentiousness. As to be expected, such a strong critique could only have been met by an equally strong defense. A rejoinder to Fétis's letter was quickly published in a subsequent issue. But it was not authored by Barbe-

reau; rather, it came from the pen of Camille Durutte, who evidently felt called on to enter into the fray in order to defend the honor of his teacher. But Durutte probably did not do Barbereau any favors by bringing up some of his own notorious occultist nonsense in his arguments with Fétis.<sup>78</sup>

It is remarkable to see how the idea of the “*échelle des quintes*” kept its grip on the imagination of many French music theorists right into the twentieth century. These would include Charles Delezenne, a scientist active in Lille who authored a large number of articles and monographs on topics of tuning and acoustics between 1827 and 1857;<sup>79</sup> Vincent d’Indy, the founder of the *Schola Cantorum*;<sup>80</sup> and August Gevaert, Fétis’s eventual successor as director of the Conservatory in Brussels, not to mention several minor authors such as Xavier Perreau and Hortense Wild.<sup>81</sup>

All this is not to claim that every (or even most) French theorist joined the triple progression bandwagon. (Charles Lalo was one prominent intellectual at the beginning of the twentieth century with strong interests in music theory and psychology who viewed the obsession of his many predecessors for the triple progression as completely misguided.<sup>82</sup>) Despite Lalo’s protestations, though (and not to forget Fétis’s arguments), many French theorists continued to invoke the series in their writings well into the twentieth century. And one reason for this attraction has already been indicated: the triple geometric progression of fifths seemed to offer an elegant means for tracing the evolution of musical tonalities. As Helmholtz had pointed out, the evolution of tonal scales over history seems to have resulted from musicians tracing increasing arcs around the circle of fifths, from a simple five-note scale of the Chinese and Celtic people to a seven-note diatonic scale of the ancient Greeks and early Church, and finally to a twelve-note chromatic scale used by most “modern” musicians. Unlike Schoenberg, who suggested that the evolution of harmony might be understood as composers reaching ever higher into the overtone series, the circle of fifths offered far more “useable” harmonies even if its notes needed to be tempered. As d’Indy emphasized, the overtone series (or the undertone series, for that matter) is simply incapable of furnishing all the notes that make up our scales and harmonies.<sup>83</sup>

Yet the triple progression raises a tantalizing question: do scale systems—and perforce, musical tonalities—evolve in a rational and predictable manner? And if they do, is the twelve-note chromatic scale resulting from the complete cycle of fifths the end of this musical development, or might it continue onward into ever-increasing complexity as one traverses an expanding series of justly tuned fifths? This was precisely an idea expounded in the 1930s by the American music theorist Joseph Yassar, who thought a nineteen-note division of the octave would be the next step in this evolution-

ary process, roughly tracing as it does an ever-expanding Fibonacci series.<sup>84</sup> The point is, whatever one's theory, scale systems seemed to be evolving and expanding over time, and presumably this evolution is controlled by some logical principle. If this were true, should one not be able to predict future stages of tonality? Whether that future was a dark slope leading to decadence and decline or, on the other hand, the advent of a new and unforeseen era of creative renewal remained a contentious question. Fétis, we will recall from chapter 1, had some quite specific ideas himself about how tonality would continue to evolve in the West. Let us look then in our final chapter to the future of tonality as envisioned by our Belgian oracle. As with so much else that Fétis's theory of tonality bugged, his ideas continued to generate as much conflict as consensus.

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## Tonal Futures

Among all of Fétis's many incredible claims, perhaps the most audacious was that his theory of tonality could predict the future of music, at least as it would develop in the West. We will recall that he had famously prognosticated that the last stage of modern tonality (after the stages he called *unitonic*, *transitonic*, and *pluritonic*) would be that of *omnitonic* music.<sup>1</sup> This stadial understanding of tonal history was already formulated in 1831, where it played a key part of his dramatic revelation on the road through the Bois de Bologne that we heard about in chapter one.<sup>2</sup> There and then he foresaw omnitonic music as the inevitable telos of musical evolution in the West. But Fétis lived for almost four decades beyond his initial revelation, and he would have many opportunities to see whether his ideas would be borne out in the music written by his contemporaries. Before we attempt to assess Fétis's success as an oracle of the musical future, though, we should note that he was hardly alone among nineteenth-century music historians in thinking about music evolving in discrete stages.

### MUSIC HISTORY 1, 2, 3

It was a venerable axiom of Enlightenment thought that world history was developing in discrete and predictable stages of progress following universal laws of growth. The writings of both Condorcet and Vico are representative of this kind of eighteenth-century historiography.<sup>3</sup> In the early nineteenth century, we might well cite Comte's "Law of three stages" (*lois des trois états*), which was first articulated by the philosopher in 1822 as also a legacy of this Enlightenment teleology (albeit now infused with a good deal of Hegelian dialectic). According to Comte's analysis, humankind was destined to pass through three stages of growth: a "theological" (or "fictitious")

stage, then a “metaphysical” (or “abstract”) stage, and finally attaining full maturity at a “positive” (or “scientific”) stage.<sup>4</sup> In Comte’s view, society (in the West, anyway) was in the middle, “metaphysical” stage of development and just at the cusp of this third and final stage, one that he hoped to usher in with his positivist program.

Music historians in the nineteenth century, like their counterparts in other historical disciplines, were also fond of parsing their subject into discrete stages, epochs, ages, and the like. Choron, for example, thought that Western music consisted of five stages, while Kiesewetter counted twelve “epochs” in the history of music. But for reasons that might be as much ideal as empirical, most nineteenth-century musicologists seemed drawn to a tripartite division when thinking about the unfolding drama of music history.

For example, Joseph d’Ortigue in 1833 saw the great arc of Western music history progressing from a beginning stage of religious music in the Middle Ages through a second stage of dramatic music in the seventeenth and eighteenth centuries and finally a third stage of instrumental music in his own day.<sup>5</sup> In Germany, both Karl Christian Krause and Adolf Bernhard Marx offered somewhat analogous tripartitions of Western music.<sup>6</sup> Indeed, well into the twentieth century, French writers continued to offer variations of such threefold divisions of music history. For example, in 1912, the composer Vincent d’Indy proposed three “eras” of musical evolution consisting of (1) a rhythmic-monodic era (interior art), (2) a polyphonic era (exterior art), and (3) a metric era (personal art).<sup>7</sup> At virtually the same time as d’Indy was writing, the musicologist Jules Combarieu depicted Western music in three metastages: the first in which music is treated as magic (“with its incantations”), the second stage in which music is used for religious purposes (“with its lyricism in various forms: hymns, odes, and dramas”), and finally the third stage in which music emerges as an art (“which separates itself gradually from dogma to become organized parallel to sacred song”). This final period Combarieu further subdivides into three parts: (1) secular diversion; (2) individualistic expression, and (3) naturalism.<sup>8</sup> Then there was Auguste Sérieyx, a student of d’Indy, who posited three “metaphysical states” of tonal evolution that were clearly indebted to Fétis: “immobility,” “oscillatory,” and “translation.”<sup>9</sup> For Sérieyx, the first immobile stage corresponds to the static tonality of plainchant; the second stage of “oscillatory” music corresponds to the harmonic poles of modern tonality (tonic/dominant in major, tonic/relative in minor); and the third stage in his triptych is the music of enharmonicism (essentially a notational “translation”) that leads to extremes of chromatic harmony and modulation and thereby portending the “destruction” of all tonality.<sup>10</sup>

It is not my intention here to enumerate and summarize all the many other attempts of nineteenth- and early twentieth-century historians to parse music into various stages of development.<sup>11</sup> But it is worth noting that over the course of the nineteenth century, such tripartite divisions of history often had recourse to biological models in which organisms can be seen to develop ontogenetically and species phylogenetically in three ages.<sup>12</sup>

Such an organic model might well be the best way of looking at Fétis's own historiography, for it reflects well his frequently cited adage that "music does not progress, it merely transforms." Fétis had already applied this notion to his reading of Beethoven's creative growth. In his entry for Beethoven in the first edition of his *Biographie universelle* published in 1837, Fétis divided Beethoven's creative life into three "categories" or "epochs." (Though Fétis was not the first historian to assess Beethoven in this manner, his analysis proved the most influential because of the powerful megaphone which was his published biographical dictionary; it was his work that inspired Wilhelm von Lenz's monograph of 1852 in which the Russian-German writer laid out the classical paradigm of "les trois styles de Beethoven."<sup>13</sup>) Notably, Fétis calls Beethoven's growth over these three epochs a "progressive transformation" (*BU*<sup>1</sup>, 2:109).

Fétis describes the first epoch of Beethoven's life as that of emulation. In this case, it was the young composer's imitation of the works of Haydn and Mozart that gave him the necessary grounding in which his own genius and instinct could be cultivated. This genius soon revealed itself "through the sheer absoluteness of its creativity" in the great *Eroica* symphony, which heralded the advent of Beethoven's great middle period of creativity. "Here, all trace of inherited forms disappears," Fétis observes with admiration. "The composer is himself, his individuality asserts itself majestically; his work becomes the embodiment of an epoch in the history of music."<sup>14</sup> Beethoven's second, middle epoch, lasting another ten years, saw the composition of his greatest masterworks, culminating with his Opus 92 in 1814 (the Seventh Symphony). Evidently forgiving for the moment some of the part-writing errors we saw in the previous chapter, Fétis insists that all of his music during this fecund period "springs from a free-ranging imagination and is full of daring; but it remains within the limits set by good taste, a true sense of fitness in harmony, and the need for clarity of thought."<sup>15</sup>

Finally, there are the late, third-period works that Beethoven composed in the final years of his life that testify to a gradual decline of his genius:

Without his being aware of it, his originality lost something of its spontaneity, becoming systematic. The limits with which he had so far oper-



ated were turned inside out. He carried to excess the reiteration of the same ideas. Occasionally he pursued the development of a chosen subject to the point of incoherence. His melodic thought gradually lost its clarity and it became more and more dream-like. His harmony acquired a certain hardness and seemed day by day to show increasing signs of a decline in his memory of how things sounded. Lastly, Beethoven affected to discover new forms, less as a result of sudden inspiration than in order to satisfy some premeditated scheme. The works that show these tendencies of mind make up the third period of his life, and his late manner.<sup>16</sup>

This third and final epoch of Beethoven's life thus is a tragic story of decline and decay. No doubt much of this was due to the composer's loss of hearing. But there also seems to have been a weakening of Beethoven's creative abilities. Ulibishev may have gone too far in attributing this decline to a degeneration of the composer's mental faculties, Fétis later commented.<sup>17</sup> But there is no doubt that this "final transformation" demonstrated a composer who had lost much of his creative imagination and was searching vainly for new techniques and forms as compensation while straining other techniques that had already been exhausted in his middle-period compositions.<sup>18</sup> It is remarkable—and I think not coincidental—how closely Fétis's description of omnitonic music reflects his description of Beethoven's final period. I will return to this point in a moment.

First, however, we should note that Fétis's own history of tonal evolution in the West, though presented in four parts (or "orders"), embeds within it a tripartite subset. As we have seen in the past chapters, Fétis argued that the division between the unitonic order and the transitonic order constituted a fundamental caesura in Western music. Indeed, we might go further and say it was *the* primary rupture of Western music, one that set apart two radically differing and incompatible tonalities. The differences between transitonic, pluritonic, and omnitonic orders, on the other hand, are more of degree than kind; each still belongs within a single overarching category of *tonalité moderne*. This is one reason Fétis dared not date the onset of pluritonic or omnitonic orders as specifically as he did with the transitonic order; they were more organic gradations of transformation than radical ruptures.<sup>19</sup>

Collectively, these three stages of modern tonality represent a directed evolution in musical language even if that evolution is neither discrete nor uniform. They seem to reflect a classical ontogenetic graph of an organism evolving (not unlike Beethoven's creative life) over three broad stages of youth, manhood, and old age. (Whether that "old age" represents a state of maturity and wisdom or rather one of decay and infirmity is the problem-

atic crux of any ontogenetic model.) Fétis's distinction between these three stages of modern tonality, as we have seen, lay in the degree of modulation afforded by the appellative tritone (the "minor fifth"). It will be recalled that Fétis saw this tritone as uniquely suited for defining a key center, whether through the common dominant seventh chord or through variants such as the diminished seventh chord and augmented sixth chord. At the risk of some simplification, the three stages of modern tonality represent increasing intensifications, elaborations, and accelerations of modulatory models. These differences, it should be emphasized, had little to do with the more traditional categories of genre or style with which most other music historians had determined the development of Western music. Over the course of book 3 from his *Traité*, Fétis offered detailed explanations and illustrations of his three stages of modern tonality. Here follows a quick synopsis of his arguments.

**Transitonic order.** We have already heard in chapter 3 about the revolution of musical tonality enacted by Monteverdi with his daring use of an unprepared dominant seventh chord in his fifth book of madrigals, thus ushering in a period of modern tonality following the long penumbra of plainchant tonality. While the innovation in "Cruda Amarilli" was that of a single unprepared dominant seventh chord to define and express a key, Monteverdi evidently realized—indeed within the very same madrigal—that the same chord could be used to define other neighboring keys through modulation. Most importantly, though, the dominant seventh chord introduced an "accent" of intense emotional affect through its appellative energy, one that proved essential to the establishment of dramatic music in the seventeenth century. Thus the great period of "transitonic" music was made possible. It shows modern tonality in youthful bloom as composers experimented with modulation, testing various harmonic "transitions" between keys. Particularly in the eighteenth century, the dominant seventh chord and its various "derivatives" (primarily the diminished seventh chord) allowed composers to move quickly between keys both diatonically and chromatically, as Fétis illustrates in a series of rapid harmonic transitions shown in example 7.1. Over the course of thirty-two measures, Fétis's example contains no less than fifteen modulations touching on twelve different keys.

**Pluritonic order.** By time we get to the middle of the eighteenth century, modern tonality had grown up. The transitonic order had given rise to some of the greatest masterworks of Western art through the pens of composers such as Marcello, Bach, Handel, Durante, Pergolesi, and Gluck. But by about 1775, according to Fétis's reckoning, a few composers felt the need to push the boundaries of modulation farther (*Traité*, 177). Mozart, whom Fétis singles

Example 7.1. Examples of harmonic “transitions.” *Traité*, 176.

Example 7.2. An enharmonic respelling of a dominant seventh chord as an augmented sixth chord. *Traité*, 181.

out as the first to understand the need for a “new source of expression,” did so by modifying the natural dissonant chords with “substitutions.” Fétis means by this that the dominant seventh chord and diminished seventh chord could both be enharmonically rewritten with notes drawn from differing scales. So to take the example of a diminished seventh chord built on the leading tone of C (B–D–F–Ab), one could rewrite the chord as C $\flat$ –D–F–Ab, whereby D becomes a new leading tone that can resolve to the new tonic of E $\flat$ . Such enharmonic substitutions actually allow the diminished seventh chord to resolve to four different keys depending on the note that is changed.

The dominant seventh chord may similarly be rewritten enharmonically to create an augmented sixth chord and consequently become a pivot to a completely new key area. As shown in example 7.2, the dominant seventh in the key of C major may be rewritten and then resolved as a (German) aug-

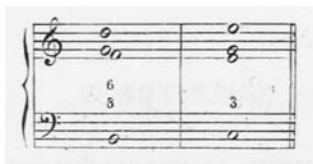
mented sixth chord such that the progression moves to the key of B major, a semitone below the original key.

Through the use of enharmonic changes such as these, a “plurality” of tonal tendencies can be created from a single harmony.<sup>20</sup> In this dynamic midlife of modern tonality, some of the greatest masterworks were composed by Mozart and Beethoven. Pluritonic music allowed them a range of modulatory possibilities while also enhancing the dramatic intensity of their music. Fétis cites a few choice examples of this modulatory potential in Mozart’s *Don Giovanni*. Yet along with the maturation of modern tonality, already a few disconcerting signs of its precarious future are noted. In this new period of art, “this new medium has introduced . . . the sensation of surprise; a sensation all the more sought after in the present state of society, since one of the maladies of the human species, in our time, is the satiation of simple emotions” (*Traité*, 183; *Treatise*, 180).

As this last quote suggests, Fétis harbors some reservations about the over use of enharmony. It is not that pluritonic enharmonicism cannot be an appropriate dramatic resource for composers. It is, after all, a “natural and necessary development” in art. But Fétis worries that the procedure can be misused by composers who merely seek to surprise, and thereby it becomes a formula that “coarsens and degrades the most noble procedures of art” (*Traité*, 183; *Treatise*, 180). This worry turns to alarm as Fétis finally analyzes the third and final stage in the development of modern tonality, that of omnitonic music.

**Omnitonic order.** If the evolution of modern tonality seemed to be driven by composers seeking evermore elaborate and ever-accelerating means of modulation, it was easy for Fétis to predict where this would lead: “the universality of the tonal relations of melody, through the joining of the simple transition to simple enharmony, and to the transcendent enharmony of the alterations of the intervals of chords” (*Traité*, 184; *Treatise*, 180–81).<sup>21</sup> In other words, the primary modulations of the transitonic order and the enharmony of the pluritonic order are now combined and subjected to additional and multiple alterations that allow the transition to “any key whatsoever.” These alterations consist of the canonical mechanisms of his harmonic pedagogy already discussed in the previous chapter: prolongation, substitution, and chromatic alteration. And the result of such “transcendent enharmony” is the stage Fétis calls “omnitonic.”

To illustrate what music of the omnitonic order sounds like, Fétis takes a simple diatonic cadential progression of “natural” harmonies, a “chord of the minor fifth and minor sixth” resolving to the perfect chord on C (ex. 7.3) Applying liberally the three primary tonal operations that he discussed and



Example 7.3. A cadential progression of a  $\frac{6}{5}$  chord resolving to the tonic. *Traité*, 184.

illustrated in the previous sections of the chapter, this progression can be modified in a seemingly limitless number of ways. Fétis goes on to insist that many of the new notes created by these procedures possess “attractive tendencies” toward scale degrees beyond that of the original tonic. Indeed, as one tests various possibilities of substitution and alteration, it turns out that there are no keys that cannot be directly connected. In example 7.4, we can see examples from the *Traité* that illustrate how the original progression in example 7.3 can be expanded through a combination of these operations to resolve to a half dozen keys other than C major. And a further dozen examples of modulation elaborating the same progression are found in the following pages (though not shown here).

There seems to be no voice-leading syntax that limits the composer in applying these various operations save that the upper voices move in step-wise motion. Otherwise, almost any note of the progression can be treated as an attractive tone “resolving directly into any key whatsoever” (*Traité*, 188; *Treatise*, 185). More precisely, a single note “may be placed in immediate relationship with all the scales of the two modes” (*Traité*, xlvi; *Treatise*, lxxvi). In practice, this seems to mean that any note of a chord or its alteration has the potential of becoming a leading tone to a new key or its dominant. This is the omnitonic order of “transcendent enharmony” that Fétis foresees as the future of music.

Fétis believed that the omnitonic order opens up infinite resources for arousing “ardent passions” or expressing “feelings of profound melancholy” (*Traité*, xlix; *Treatise*, lxxvii). One other result of this order is the creation of new harmonic configurations. Indeed, Fétis told Troupenas that he had already discovered at least seventy-seven new harmonies that were “previously unknown” to composers until now through this mechanism of transcendent enharmony (*Correspondance*, #38-5, 138). Perhaps worrying that his discovery would be misconstrued as compositional dilettantism such as exemplified by Blein’s examples (shown in ex. 6.1), Fétis never tabularized these new harmonies in publication. But he did express satisfaction in later years at seeing many of his chordal inventions born out in practice.

N°1. DÉMONSTRATION.

N°2. DÉMONSTRATION.

N°3. DÉMONSTRATION.

N°4. DÉMONSTRATION.

N°5. DÉMONSTRATION.

N°6. DÉMONSTRATION.

N°7. EXEMPLE.

N°8. DÉMONSTRATION.

N°9. DÉMONSTRATION.

Example 7.4. Examples of progressions in the "omnitonic order" derived from example 7.3. *Traité*, 186.

We may be surprised to learn that Fétis finds the first traces of this new order in the music of Mozart and Rossini. But it is a process he was sure would accelerate as we approach the inevitable and final end in the long history of harmonic development in the West:

One should not be mistaken; the principle and the forms that I have just described are the path of a new world of events in tonality open to art-

ists. It is the last period of the art, with respect to harmony. (*Traité*, 191; *Treatise*, 186)

Not that Fétis was entirely pleased by the prospect. On the contrary, he worried greatly that the increasing exploitation of these “transcendent enharmonies” by composers (the “insatiable desire for modulations and attractive tendencies that torments the artists of our time”) portends disaster for the future of music. Above all, melody will lose “its purity and no longer [have] an absolute existence, independent of all external conditions, by becoming harmonic and modulating” (*Traité*, 196; *Treatise*, 192). Meanwhile, tonal unity will be completely lost as composers become obsessed saturating their music with endless and unpredictable stimulative tendencies (*Traité*, 193; *Treatise*, 190).

It is interesting (if a bit perplexing) to note that in his lectures of 1832, Fétis argued that all four orders of tonality, including the older unitonic tonality, can and should occur together. The notion that some future composer would write exclusively in the omnitonic order was one that struck him as a horrifying thought:

God forbid that it should be so! Each one of the orders has its advantages and qualities that we must be careful not to renounce, because that would be to impoverish the art on the one side while enriching it on the other. The mixture of the four orders, each of them being employed appropriately, will be the final stage of tonal perfection; this perfection will be founded on both suitability and variety.<sup>22</sup>

But writing in 1844, Fétis was shocked to see how quickly a number of composers began to gravitate toward omnitonic writing. “When I was foreseeing and announcing this final outcome of the harmonic direction of music, in my course on the philosophy of this art [in 1832], I did not believe that [it] was so close at hand.”<sup>23</sup> No longer hewing to a *juste milieu* to help moderate their compositional language, these composers seemed intent on moving exclusively into the world of omnitonic writing. We hear echoes once again of Hegel (or perhaps anticipations of Spengler?) in Fétis’s melancholic peroration to his book:

No doubt it was the destiny of harmony to attain the final limits of these tendencies and to realize all that is possible in it and through it; but there is also no doubt that the frequent use of multiple attractions of tonalities has the serious drawback of incessantly agitating nervous emotions

and depriving music of its simple character and purity of idea in order to transform it into a sensual art. Besides, how composers make use of these attractions and impassioned accents often constitutes a contradiction [*contre-sens*], for they proliferate these nervous elements in the accompaniment of melodies where words indicate a calm and sweet subject. These modulating harmonies are today used like lavish instrumentation; their effect most often produces fatigue in the mind and senses rather than satisfaction. (*Traité*, 200; *Treatise*, 194; translation modified)

Omnitonic tendencies in music thus alert us to the fact that we are now entering a third, late stage of tonal development, one that displays symptoms of decline and decadence even as it opens up radically new and daring resources for the most adventurous composers. Like Beethoven's frantic scramble to find alternate (and artificial) means for sustaining interest and cohesion in his last compositions, omnitonic music is a symptom of a late style. Not that Fétis ever claimed Beethoven's third period to exhibit the harmonic chromaticism or modulatory excesses that he predicted would constitute the omnitonic order of the future.<sup>24</sup> Rather, it was that both display similar symptoms of degeneration and exhaustion. Here phylogeny recapitulates ontogeny, to invert Ernst Haeckel's famous dictum.

This might be a good point to correct an oft-repeated claim that with his notion of omnitonic music, Fétis was anticipating the atonal revolution ushered in by Schoenberg and his disciples in the early twentieth century. As we have seen by his examples and descriptions, Fétis had no such thing in mind. Omnitonic music is, if nothing else, an intensification and *maximalization* (to borrow Richard Taruskin's useful term of) of the very tonal markers that characterize traditional harmonic ("modern") tonality. It was not so much an absence of tonal indicators, then, as it was a surfeit of them. One acquaintance of Fétis who actually lived to witness this atonal revolution recognized this paradox. Writing in 1919, an elderly Camille Saint-Saëns observed, "Fétis perceived the coming of the omnitonic system. 'After that,' he said, 'I cannot see anything more.' He was not able to foresee the rise of cacophony, the discordant din [*charivari*] [of the new music]."<sup>25</sup> If the omnitonic order was the destiny of Western music, then, it was to be a dark one of unrelenting tonal stimulus and modulatory excess.

So what music could Fétis have been referring to that gave him a premonition of this forbidding tonal future? The two examples of omnitonic enharmony that he cites in the *Traité*—a few measures of a Mozart string quintet and the opening of a cantilena by Rossini—hardly seem to be auspicious examples of music that evoke those "nervous emotions" and "fatigue



in the mind and senses" about which he expresses such anxiety. Similarly, a small, awkward solfege example that he rewrote to indicate some of these "quasi-omnitonic" tendencies scarcely exceeds harmonic elaborations that one finds in a typical passage of Mendelsohn.<sup>26</sup> But if Fétis was cautious in pointing to examples of this new music, many of his readers were not.<sup>27</sup> For a few of them, it even became a program outlining the future path composers must take. Such was the case of probably the most unlikely disciple of Fétis, Franz Liszt.

### LISZT AND TONALITIES OF THE FUTURE

The relation between Liszt and Fétis is a paradoxical one. When Fétis first heard the piano virtuoso perform in Paris in 1828, he was astounded along with everyone else by his technical prowess. But he also harbored grave doubts about Liszt's artistic sensibility. In a critical review of one of these concerts, Fétis wrote that Liszt had the talent to astonish his audience more than to move his audience (*étonner* rather than *émouvoir*).<sup>28</sup> Still, there was enough respect that the two maintained a cordial relationship. And we know from Liszt's own testimony that he attended the series of lectures on tonality Fétis gave in 1832.<sup>29</sup> It was during these lectures that Liszt first heard about Fétis's budding ideas regarding the history and future of musical tonality. But their relationship was strained when Fétis later took up the cause of Thalberg in his rivalry with Liszt, leading to a series of prickly public letters between the two that were published in early 1837.<sup>30</sup> Matters did not improve as Fétis observed Liszt gravitating as a composer toward the circle of German progressives associated with Brendel, whose aesthetic theories and compositional program for "the music of the future" Fétis found abhorrent.

But little by little, the relationship between Liszt and Fétis began to warm up. Liszt, it appears, remained genuinely interested in Fétis's historical work, and they soon engaged in an increasingly lively correspondence with one another. In several of these letters, the topic of tonality—and especially that of the omnitonic order—was broached. Liszt was obviously fascinated by Fétis's notion of omnitonic music (and also, be it noted, omnirhythmic music).<sup>31</sup> In several of his later writings, he made reference to the concept. For example, he once wrote that omnitonic music was the "endpoint" (*Endziel*) of music, even referring once to his own symphonic poems as "omnitonal symphonies."<sup>32</sup> For his part, Fétis did not hesitate to claim that some of Liszt's more adventuresome piano works might have been inspired by his theory of omnitonic music.<sup>33</sup> Liszt was clearly not offended by the suggestion, for he



Example 7.5. "Prélude omnitonique" by Liszt. From an album leaf dated April 21, 1845. *Neue Liszt Ausgabe*, supplement, no. 4, 162.

was already thinking about even more radical innovations in harmonic writing that he might incorporate into his own compositions, and the theorist's description of omnitonic music as the next step in the evolution in music seemed to offer a strong justification for his efforts. In a letter Liszt wrote to Fétis in 1842, he jokingly invited his elder correspondent to visit him in Weimar "to say hello and listen to some symphony rather vaguely omnitonic in my way."<sup>34</sup>

We can get an idea of some of the harmonic innovations Liszt may have been thinking about during this time from a few very short piano sketches that he penned in a number of album leaves from the early 1840s, one of which he titled a "Prélude omnitonique" (now listed as SH 166e in his catalog of works). There are several variants to these album leaves, but they all have in common a short series of arpeggiated diminished seventh chords played in rapid sequence, each chord transposed by descending semitone. (Thus, after four chords, Liszt has cycled through the complete chromatic aggregate.) Some of them simply stop on the last diminished chord, though two of them tack on (somewhat clumsily) an authentic cadence ending on F# major. One transcription of this omnitonic prelude is given in example 7.5.<sup>35</sup>

How seriously we should take this as a true example of omnitonic writing it is hard to say. There is certainly no modulatory progression or the "transcendent enharmonies" that Fétis, as we just saw, claimed to be a key characteristic of omnitonic music. On the other hand, the use of a diminished seventh chord without any tonal resolution points tantalizing to a harmonic future that Fétis could only dimly envision. Still, while these sketches may be somewhat suggestive, we would need to wait another thirty-five years for Liszt to begin composing music that might well be seen as his real answer to Fétis.

In a series of remarkable late piano works that have received increasing attention by scholars in recent years, Liszt seems to have attempted to

sketch out his own idiosyncratic essays in omnitonic writing. Indeed, he even offered to send to Fétis some of these works for his appraisal if not his approbation.<sup>36</sup> (He also—tantalizingly—began a harmony treatise on this harmony of the future, which has not survived.<sup>37</sup>)

It's hard to say what is more striking about these works, the repression of all virtuosic displays or their unusual harmony. And unusual is putting it mildly. In one of these pieces, titled "Nuage gris" (Gray clouds), written in August of 1881, Liszt employs a series of chromatically descending augmented triads, never to settle down in any clear key—or consonant triad for that matter. (The link to his early sketches of an omnitonic prelude made up of analogously descending diminished seventh chords is obvious.) But as with the omnitonic prelude, "Nuage gris" is hardly omnitonic music as Fétis defined. Nowhere do we find the frequent and daring modulations to other keys (distant or not) or contorted chromatic prolongations that Fétis designated as the hallmark of this new order. In fact, there is no clear key to be seen at all. The shifting chromatics and displacements he described seem instead to be replaced by music of stasis and even stagnation. While Liszt may well have taken inspiration from Fétis's theoretical description of the omnitonic order, he certainly formed his own ideas about how it might be put into practice.<sup>38</sup>

An even more remarkable late piece by Liszt is the *Mephisto Waltz* no. 4, with the paradoxical subtitle, "Bagatelle without tonality" (*Bagatelle, sans tonalité*) composed in 1885 (S.216a). There is no stable key center at any point in the piece's opening measures. Indeed, there is no real identifiable key at all. (Liszt is apparently using the term *tonality* loosely here to indicate key rather than as a stylistic designation.) The work opens with tritone and diminished fourth intervals deployed in tonally ambiguous contexts along with wafts of octatonicism. If the harmony—and rhythm—appear to settle down between measures 13 and 16 on some precarious G tonal center given the repeating left hand iteration of the  $\frac{6}{4}$  harmony, it is short lived. (The right hand sextuplets alternate, tellingly, between the subtonic and leading tone, as if to tease the listener concerning its modal identity.) The chromaticism in both hands quickly begins to fray, and any sense of tonal mooring soon becomes completely lost. Over the next 160 measures, we are subjected to a whirlwind ride through a thicket of chromatics undergirded by mixtures of major, augmented, and quartal harmonies clashing with one another along with a chromatic obbligato that weaves like a serpent through these various harmonies.<sup>39</sup>

It is easy to see why a number of recent scholars have thought these late works of Liszt are remarkable harbingers of modernism.<sup>40</sup> If none of the pieces can rightly be called atonal, neither are they omnitonic, at least by the description Fétis gave.<sup>41</sup> For all his claims of indebtedness to Fétis,

it seems that Liszt took more of a general license for harmonic and rhythmic experimentation from the elder scholar than any specific compositional prescription.

## WAGNER

It is curious that Fétis, in all his discussions of omnitonic music and the future of tonality, did not anywhere cite the music of the composer whose works were most often discussed in the last two decades of Fétis's life (in France as elsewhere) as portending the future of music. This was of course Liszt's son-in-law, Richard Wagner. After all, no composer became more notorious for introducing nerve-fraying chromaticism and vertiginous modulations in his music. Surely a few bars from one of Wagner's operas would be more appropriate to cite than anything by Mozart and Rossini to illustrate this "final" order of tonality. Maybe this exclusion was understandable in 1844, as Wagner's operas were not well known in France at that time. But that could not be an excuse after midcentury, when Wagner's newer operas—and especially his writings on opera—were being increasingly circulated in print and discussed in the French press.

For a music critic who had prided himself about keeping up with the latest musical trends from abroad, it is odd that Fétis never seemed to have studied carefully Wagner's mature operas. He claimed to know a number of his earlier stage works such as *Der fliegende Holländer*, *Lohengrin*, and especially *Tannhäuser* (the latter having received a stormy and quickly aborted revival in Paris in 1861). And there is even evidence that Wagner sought out a meeting with Fétis in 1860 during a visit to Brussels, though the uncorroborated report suggests it was a short meeting culminating in some uncivilized name calling.<sup>42</sup> Still, Fétis admitted in his 1869 entry on Wagner in his *Biographie universelle* that he did not know the music of *Tristan*, though he had seen its libretto.<sup>43</sup> To be sure, he wrote an important (and scathing) assessment of Wagner's aesthetic and dramaturgical theories in 1852.<sup>44</sup> Yet even when Fétis discussed those Wagner operas he knew, he had surprisingly little to say about their harmonies or modulations. This was not untypical of his time. French critics always seemed much more focused on Wagner's revolutionary thoughts about opera reform than on musical harmony.<sup>45</sup> And when they did discuss the harmony, it was rarely with any technical description; more often it dealt with its effects on listeners' nerves. Wagner's piercing chromaticism and dizzying modulations, listeners often complained, induced an excitability and overstimulation of the nervous system that many compared to a pathological symptom, one that might even be diagnosed as

hysteria.<sup>46</sup> The music critic Jacques-Leopol Heugel perhaps caught something of this quality in his stinging review of the infamous Paris production of *Tannhäuser* in 1861:

The public was enervated and overstimulated by a strident orchestration with its rapaciousness for effects and dissonances, . . . by the paroxysm of high violins, and particularly by the intemperance of the recitatives that produced the most prolonged torpor in a manner most dangerous for the health of the listeners.<sup>47</sup>

If one did bother to look at the music more technically, one might guess that the cause of much of this nervous stimulation and excitability was the saturation of the music with those appellative semitones and modulatory excesses that Fétis had diagnosed as a symptom of the omnitonic order. (The Venusberg Bacchanal from the first act would be an excellent specimen of such omnitonic tendencies.)

As noted earlier, the music historian Richard Taruskin has characterized Wagner's music—and indeed, much German music in general from the late nineteenth century—as a “maximalization” of musical resources and compositional techniques. Among the harmonic techniques of maximalization that Taruskin identifies is that of “tonal navigation,” by which he means the range and distance of key relations that can be touched on. Another technique concerns the intensification of dissonance and “even more important, the postponement of its resolution.”<sup>48</sup> Of course, those postponed resolutions are (by tradition) half steps—that interval of affinity by which “desire” can be conjured for the listener and even enhanced through suspension.

It is all actually not a bad description of Fétis's omnitonic order. And a few French music theorists made the connection. One of them was the composer Louis Pagnerre, who in 1885 welcomed the omnitonic future of music with undisguised enthusiasm. Since Fétis had showed us how tonalities had evolved since the beginning of time, he wrote, the changes we were now witnessing in Wagner's music were to be welcomed as but the next stage in the ongoing evolution of music.<sup>49</sup> Pagnerre greatly admired Wagner's innovations in chromaticism, hailing his music as “l'ordre omnitonique par excellence” (Pagnerre, 124). Wagner achieved his effects, Pagnerre noted, precisely in the manner by which Fétis had described the omnitonic order, through his adventuresome employment of modulation using chromatic and enharmonic resources. And while such techniques can indeed be traced back to Mozart, as Fétis had pointed out, Wagner's relentless use of modulations infused by delayed harmonic resolutions and obfuscating chromaticism was such that

virtually all sentiments of tonal orientation became neutralized (“où tout sentimens de tonalité disparaît,” 124). If Wagner’s music sounded the death knell for traditional tonality (“C’est l’anéantissement presque complet de l’unité tonale,” 129), this was hardly a development Pagnerre believed was to be lamented, since music must always evolve, must always move forward.

The music theorist Anatole Loquin also saw Wagner’s music moving into a new direction that seems to have been anticipated by Fétis. But instead of calling this *omnitonique*, Loquin preferred the label of *intonalité*—literally “nontonal” or “atonal” music.<sup>50</sup> He gave as an example the Fire Music from Wagner’s *Die Walküre*, with its major-third division of the octave. For Loquin, one of the most prolific if idiosyncratic French theorists in the second half of the nineteenth century, such innovations of Wagner and his followers constituted nothing less than the final stages of a chromatic evolution that had begun when the very first accidental was introduced into diatonic plainchant a thousand years earlier. We were fast approaching the day, Loquin worried, when music will have no more place to develop and its evolution will then cease.<sup>51</sup>

In a more practical vein, some composers gave prescriptions for writing the music of this future that sounded like it might have come straight from Fétis’s pen. One—Anselme Vineé—thought that the key was to learn to apply appellative tones to harmonic cadences along with Fétis’s modifications of substitution, alteration, and prolongation. So to take a simple progression such as the authentic cadence, one could add to or alter any of the diatonic harmonies of the dominant chord so long as the chord resolved to a tonic triad.<sup>52</sup> (The leading tone was no longer essential for this purpose, Vineé insisted, as other chromatic notes could offer the necessary *liaison* to the tonic.) Vineé illustrated his ideas with a number of such model cadential progressions, most of which sounded like extreme versions of Fétis’s own examples given in example 7.4 (Vineé, 24–26). His theory can thus be seen as the logical extension of Fétis’s theory of omnitonic music—and it might also be said, of a venerable partimento tradition of harmonic elaboration—by which diatonic harmonies may be modified by means of canonical operations of substitution, alteration, and prolongation. But unlike Fétis, Vineé places no restrictions on which (or how many) alterations are allowed. “In principle,” he writes, there is no alteration that is inadmissible in his system “provided that it is based on a diatonic scale degree, which is to say, that it plays the role of an appoggiatura, neighbor note, or passing tone” (27). He concedes that not all of these chords will be tasteful to musicians. But they are free to pick and choose as they will. He is merely like a chemist mixing new colors for the use of painters (28).

Fétis's theory of omnitonic music thus found a small but receptive audience among a few French musicians at the end of the nineteenth century. (Even among practical pedagogues, Fétis's omnitonic theory found a few echoes.<sup>53</sup>) But just as clearly, many more French composers demurred; they were less than eager to go down the omnitonic rabbit hole. After all, why should they adopt a musical style that was so closely associated with an opera composer from across the Rhine who had made such snarky comments about French music and the French nation? There were surely other ways to move music into the future. And it was Fétis who also may have given them some ideas how to do that as well.

### NEW PATHS FORWARD TO THE PAST

For many French composers, perhaps the way forward lay with the music of the past. Many of them thought that the tonality of the Middle Ages (Fétis's unitonic order of plainchant tonality) or even that of the Ancient Greeks might yet hold untapped resources for the curious composer. And here Fétis played an equally important role not so much in prescribing the music they might write but in giving them an awareness of distant and exotic tonalities (both in time and place) that might prove an antidote to the German contagion.

The resurrection of older musical practices for the purpose of contemporary use was actually an old trick among French composers. As far back as the sixteenth century, a circle of French humanists called the Pléiade had founded a society with the explicit aim of recovering some of the legendary affects of Greek music. In the middle of the eighteenth century, the French theorist and cellist Charles-Henri Blainville had suggested applying the old Phrygian ("third") mode as an alternative to the major and minor scales. His aim was admittedly more antiquarianism than rejuvenation, something of a salon trick for the composer. At least that is how it was received by skeptical critics such as Rousseau and Serre.<sup>54</sup> Rousseau, on the other hand, genuinely believed that plainchant might well be a revitalizing agent for modern music even if he offered no examples of what that might sound like.<sup>55</sup>

By the end of the eighteenth century, though, practical guides for mixing (or perhaps we might better say, retaining) the modes within tonal music were becoming increasingly common. In Germany, theorists such as Kirnberger, Knecht, and Vogler had all offered composers instruction on using the classical modes. For the most part, this knowledge was useful to church musicians who needed to harmonize and elaborate chant or chorale melo-

dies. But the knowledge of the modes was also useful for the harmonization of folk melodies, a genre that was gaining increasing popularity among German composers after the first tentative citations by Haydn and Beethoven.<sup>56</sup> Yet as with Blainville's experiment, none of these attempts were understood as musical progress; they were self-consciously nods to older or subaltern musical traditions.

Through the first half of the nineteenth century, the church modes were frequently used by composers as referential topics. Opera composers, in particular, employed them to evoke pastoral or religious moods. Here we might recall the example of Berlioz mentioned in chapter 4 who sought to evoke folk music through the use of a lowered seventh—suggesting some kind of Dorian modality (p. 302n23). Auber, Meyerbeer, and Saint-Saëns all found modalism useful as a pastoral and religious topic.<sup>57</sup>

One of the composers who attempted to integrate plainchant tonality more organically into his own music turns out to have been Franz Liszt. This might seem odd to us given how we have just reviewed his attempt to apply Fétis's most radical order of modern tonality to his music. But there is no contradiction. As with Lammenais and d'Ortigue, Liszt was perfectly open to the value of both sacred and secular styles of music. Thus, in his later years, when we find Liszt experimenting with omnitonic writing, our Abbé also exerted his greatest efforts in incorporating Gregorian chant and the ecclesiastical modal system—in other words, Fétis's unitonic order—within his religious music.<sup>58</sup>

Still, among French composers, probably the most concerted attempt to revitalize the ecclesiastical modes in the later nineteenth century was by conservative church musicians. Inspired undoubtedly by some of the same Cecilian sentiments that helped spur the renovation of chant we looked at in chapter 2, many French church musicians composed organ and choral pieces based on the ecclesiastical modes. The École Niedermeyer, in particular, was a major greenhouse for this activity.

We looked briefly at the Niedermeyer program in chapter 2, analyzing its prescriptions for the accompaniment of chant on an organ in a style that was less violent to the modality of the plainsong (pp. 60–61). What may not have been clear from this discussion was how widespread and influential this school was to the promotion of modalism in French music. By the beginning of the twentieth century, there were already in place some three hundred organists in French churches who were trained in the school in addition to forty-one choir directors.<sup>59</sup> Harmonic modality “dans la manière Niedermeyer” can be heard in thousands of liturgical pieces composed by French



organists in the second half of the nineteenth century in their various preludes, introits, offertories, versets, and *sorties*.<sup>60</sup> A notable representative of the school is Eugène Gigout (1844–1925), who was a student and later a teacher in the Niedermeyer academy. Between 1889 and 1922, Gigout composed some 650 versets “dans la tonalité du plain-chant.”

We may recall from chapter 4 that this was a theme dear to the heart of Bourgault-Ducourdray. He had long worried that the resources of modern tonality were wearing out and that composers would only find rejuvenation by returning to the modes of the past, whether ancient Greek or medieval. In his lecture of 1878 during the Paris Exposition universelle at the Palais du Trocadère, he attempted to explain and illustrate how the ancient Greek modes could be a regenerating compositional resource for composers today.<sup>61</sup> Clearly inspired by the study of Gevaert that had appeared three years earlier, Bourgault-Ducourdray illustrated each of the Greek modes on a piano and compared them to major and minor scales. Again and again he would emphasize to his audience the euphonious, virile effects of the modal settings and compare them invidiously to the “enervating” sounds of the modern tonalities with their “effeminate” leading tones (thus ironically inverting the gender attributions that had previously characterized the difference between older and newer tonalities).

But who really needed to be persuaded that the ancient modes were practical resources available to composers today? Bourgault-Ducourdray pointed out that French composers had long been drawing on these scales for inspiration, citing specific works of Berlioz, Saint-Saëns, and Gounod in which modal elements could be found. (Bourgault-Ducourdray actually credits Beethoven and then the Russian school of Rimsky-Korsakov, Balakliev, and Cui for first using the Greek modes in their compositions.) Indeed, one musicologist has written a history of French harmonic practice for the later part of the nineteenth and early twentieth centuries according to the ways the modes were employed by composers.<sup>62</sup> Oddly, Bourgault-Ducourdray neglected to acknowledge the Niedermeyer School, which was still going strong as he lectured in 1878. Maybe this is understandable given his strongly Republican sympathies and antagonism to the Church. (This may also explain his penchant to focus on the ancient Greek modes rather than the medieval ecclesiastical modes, which he saw as mostly corrupted derivations.) But he might have changed his mind had he gotten to know the music of Gabriel Fauré, another graduate of the Niedermeyer School but one who learned how to think modally in a radically new way and one not tethered to liturgical function.<sup>63</sup> The French music critic Louis Laloy was more specific in crediting the

recently restored edition of Gregorian chant by the Solesmes monks as the rejuvenating catalyst of contemporary French music. If perhaps a bit too enthusiastically, he wrote that “all the liberties in our music, all its variety of accents, all its richness of harmony, its easy gait, is due to Gregorian chant.”<sup>64</sup>

We should also remind ourselves of the fact that the attraction of many French musicians to modalism in the nineteenth century (and we might well say through the beginning of the twentieth century) had obvious political motivations. It was first of all an effective inoculation to the Wagnerian chromaticism and modulatory excesses we have just heard about and that seemed to be becoming a contagion infecting so many composers—even a few in France and Belgium. At the same time, though, it was a means for patriotic French musicians to reclaim a musical heritage—*Ars Gallica*—that could be linked to an ideal (and idealized) Gothic/Gaulic past.<sup>65</sup> If Richard Taruskin is right that one of the symptoms of the German harmonic contagion was the “maximalization” of desire based on the saturation of semitonal relations and especially the prolongation of the leading tone, then perhaps the French remedy can aptly be characterized as *half-steplessness* (the term is Taruskin’s). By composing with the ancient melodies and modes of the medieval church, or even better, anhemitonic scales such as the pentatonic or whole tone, French composers could thwart this harmonic force.<sup>66</sup> In essence, as Taruskin puts it, they were getting rid of all that Teutonic harmonic “glue.”<sup>67</sup> Of course, few composers were so dogmatic as to restrict themselves exclusively to a single mode or scale in all the music they wrote. But as Taruskin demonstrates through a series of analyses, composers from Eric Satie and Gabriel Fauré to Claude Debussy and Lili Boulanger were able to cultivate a number of harmonic devices (symmetrical divisions of the octave, chordal parallelisms, modal cadences, octatonicism, palindromic voice leading, etc.) that avoided some of the traditional semitonal grammar of Teutonic tonality. And even when they did employ harmonies with recognizable dissonance such as the tritone or minor seventh, it was often in a way that neutralized any functional implication, which is to say, any “desire” for resolution; the chordal dissonances were used more as coloring and sonority. There is a supreme irony, of course, that it was a Belgium theorist writing in French in the early 1830s who seems to have so presciently identified those qualities of gluey “half-stepness” and their concomitant desire for resolution that would be born out in the “music of the future” a generation or two later. It is all the more ironic that Fétis would soon come to loathe this music as much as he seemed to predict its inevitability. But who is compelled to approve of the future that they believe themselves gifted to foresee?

## AND SIDEWAYS TO THE EAST

For many French composers, it was not Gregorian modality that held the promise for stimulating new ideas; rather, it was the more exotic scales and sounds from the Orient. And here again Fétis did service by making his readers aware of these foreign tonalities. As we learned in chapter 5, this fascination with oriental music was a long-standing one among the French. Already by midcentury, we find some of the first attempts to write “Arabesque” music that claimed to mimic the modes, rhythms, and timbres of Arabic music.<sup>68</sup> Saint-Saëns was “the master of the Middle East travelogues” according to Ralph Locke. Several of his major works (*Samson et Dalila* from 1875 and the *Suite Algérienne* from 1880) offered a veritable thesaurus of orientalist tonal stereotypes that were picked up by subsequent generations of composers (not to mention Hollywood film producers) to convey a sense of Levant alterity.<sup>69</sup> Still, while Saint-Saëns was captivated by the melismas and intonations of the Arabic singers he heard during his trips to Algeria (the voices “something between that of a bird and that of a human”), he nonetheless felt it was music that could never be analyzed let alone notated. His own music was thus more of evocation than imitation.<sup>70</sup>

Perhaps the most obvious scale marker of an oriental topic could be found in one of the Arabic modes with multiple half-step affinities, such as those found in the “Gypsy” scales (or Liszt’s “tziganes” modes; often called the Hajiz scale in Arabic).<sup>71</sup> While there are several variants of these “oriental” scales (one of which we saw illustrated in ex. 4.15), they are characterized primarily through gapping augmented seconds (often between  $b\hat{2}$  and  $\hat{3}$ ,  $b\hat{3}$  and  $\#4$  and/or  $b\hat{6}$  and  $\hat{7}$ ). What is perhaps more noteworthy—at least from the perspective of this study—are the many diatonic semitones in oriental scales that each can exert strong appellative connections:  $b\hat{3} \rightarrow \hat{2}$ ,  $\#4 \rightarrow \hat{5}$ ,  $b\hat{6} \rightarrow \hat{5}$ , and  $\#7 \rightarrow \hat{8}$ .<sup>72</sup>

These sliding semitonal relations were often emphasized by being scored for sultry instrumental voices (such as oboes) and accented through rhythmic agogics and melodic embellishments, increasing, one supposes, their sensual tonal pull. (The half steps were precisely those points that a singer or instrumentalist might bend to create those quarter tones discussed in chapter 5.) Today these scales might strike us as a soundtrack to a cartoon parody of Middle Eastern music. But for many listeners in the nineteenth century, they were the epitome of oriental exoticism.<sup>73</sup> As Saint-Saëns noted,

The old modes are coming back, and following right behind will be an eruption of oriental modes of immense variety. All of this will furnish

new elements [to revitalize] melodies that are exhausted. . . . Harmony will also be changed as will rhythm, which has until now been scarcely developed.<sup>74</sup>

A few more adventurous musicians even wondered whether the microtones of Arabic and Indian scales taught by Fétis might be another resource composers could tap.<sup>75</sup> Halévy, we recall, tried his hand at using some of these smaller intervals in his *Prométhée enchaîné*. And there were those attempts we briefly glanced at in chapter 5 to construct enharmonic keyboards that could play in quarter tones (p. 180). Even if not every composer was trying to evoke an oriental specter with these experiments in quarter tones, Fétis's theory certainly sanctioned the connection between them.

There is one final scale I might mention that also attracted several French composers in the nineteenth century as a potential resource for musical innovation. This was the octatonic scale. Composed of alternating half and whole steps (e.g., C, C#, Eb, E, F#, G, A, Bb), the octatonic scale also seems to subvert many of the tendencies and expectations of modern tonality. But in contrast to the pentatonic scale, where the half steps and tritones necessary for sustaining modern tonality are completely absent, these intervals abound in the octatonic scale. Indeed, the octatonic scale "maximalizes" the tritone content among any eight-note pitch-class set.<sup>76</sup> Still, despite the presence of multiple dominant seventh chords embedded in the scale (there are four within each of the three possible scale transpositions), it is impossible to resolve their dissonances in any traditional way. Octatonicism thus allows a certain mimicry of tonal conventions without conveying any of the expectation (or "desire") characteristic of normative tonal syntax.

Now the octatonic scale historically has been associated with the school of Russian composers around Rimsky-Korsakov beginning in the 1860s and culminating in the music of Stravinsky in the early twentieth century even though some music analysts have discovered moments of earlier music (Bach, Schubert, and—again—Liszt) in which traces of the scale may be identified.<sup>77</sup> Yet a number of French composers from the latter nineteenth century seemed to have stumbled on the octatonic scale by themselves, unaware of its reification by Rimsky and his circle. The story is an amusing one to retell again as it entails yet more polemics between thin-skinned French musicians arguing about questions of tonality.<sup>78</sup>

Edmond de Polignac, a perpetually struggling composer from a distinguished aristocratic family, claimed to have discovered a scale consisting of "les successions alternantes de tons et demi-tons." In an essay he penned (though never published) around 1879, Polignac described the scale in detail,

indicating its various harmonic implications for disposing triads at symmetrical distances. Over the following years, he tested out some compositional applications of the scale in his own music. He recognized that this scale was “outside” of the usual tonality used by composers (“dehors de la tonalité usuelle”). Interestingly, he thought the scale to be closely related to Oriental tonalities, particularly as heard in Jewish chants. In any case, Polignac only reported on his scale publicly in 1888 in a “note explicative” to a short piano piece he wrote in which the scale is utilized.

Some six years after this and independent of Polignac, another long-forgotten French composer announced to the public “a new scale” that he claimed to have developed, one that could “marvelously express the floating psychological state of our era.”<sup>79</sup> The composer in question was Alexandre de Bertha, and the scale was none other than Polignac’s scale of alternating half and whole steps (here named the “homotone” scale). Unlike Polignac, however, Bertha published his discovery in a major journal (*La nouvelle revue*, January 1894), systematically enumerating the scale in its various transpositions and permutations to a French reading public for the very first time.

Polignac read Bertha’s essay with obvious alarm and immediately sent off a retort to the *Revue*, asserting his priority over the scale’s discovery. Their subsequent “guerre des gammes,” as Sylvia Kahan has dubbed it, went back and forth concerning the paternity of the octatonic scale. Eventually, their arguments were played out in front of the French Academy of Sciences, where Bertha seems to have carried the day, much to the bitterness of Polignac (Kahan 118).



It goes without saying that Fétis would not have seen any of these experiments with new (let alone older) scalar patterns as anything to do with omnitonic music. Still less could we imagine him endorsing them even if he did. But as we already saw, Fétis was beginning to have some doubts about the omnitonic future of music. We noted earlier that he initially understood his orders of tonality as languages that could be combined by a composer. One was not destined to write exclusively in one or the other, and the best composers in the future would learn to utilize all of them. But by the end of his life, he seemed to have regretted introducing the notion of omnitonic music in the first place. The preface to the second edition of his *Biographie universelle* (1860) sounds a depressing note of resignation:

I first revealed in my course on the philosophy of music and in my treatise on harmony the omnitonic order produced by the alteration of chordal intervals as the final stage in the transition of harmony. It is true that I added a warning that the effect of these modulations would be only as good as the discretion by which they are used. Younger composers, however, did not judge them as I did; they selected only a few of the omnitonic successions among those whose rules I taught, but they used them liberally and with such frequency that it soon created fatigue and disgust. It is easier to exercise a habit than it is to develop new ideas. (*BU*<sup>2</sup>, viii)

Clearly, Fétis's own musical tastes were becoming increasingly reactionary, at least in comparison to the music that was being played around him in the 1860s. Elsewhere in the preface to this work, he lamented that too many composers today succumbed to bad taste, because of their vanities and ego, by holding to false aesthetic doctrines and employing trendy novelties for sheer effect. New music had become a game for composers of outdoing one another in enharmonic tricks. The only hope he saw was to dial back those omnitonic tendencies. There was still much good music to be written using the resources of transitonic and pluritonic tonalities, he would remind us (much as Schonberg supposedly commented that there was still some good music to be composed in the key of C major). But of course by this time there was little Fétis could do to persuade composers concerning the music they would write. While he may have been the midwife for the concept of tonality by which musicians thought about the music they composed and played, it was no longer his to command or control.

## EPILOGUE

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In the administrative register of the Brussels Conservatory of Music, a curt annotation is recorded for March 26, 1871: "At 4:00 in the afternoon, the death of Fétis."<sup>1</sup> Fétis had just turned eighty-seven years old one day before. Until that moment, he had been busy carrying out his quotidian chores as director of the Conservatoire, holding administrative meetings, listening to juries, and even conducting the orchestra. Gevaert, who would shortly be appointed as Fétis's successor, could not resist adding a bit of drama to these final hours in his eulogy. "At the moment of reaching his eighty-seventh year, feeling his forces betray his courage, [Fétis] made a supreme effort to direct one last time his valiant phalanx of instrumentalists. At the end of the concert he went to bed broken with fatigue, never to get up again. He fell like a hero struck down on the field of battle, but with the satisfaction of having secured the victory."<sup>2</sup> Perhaps the coincidence of Fétis passing away on the same day as the composer of the *Eroica* Symphony was more than coincidence.

Fétis's death put an end to his great music history project. The unfinished manuscript text that lay on his desk barely reached the fifteenth century. (According to his son Édouard, Fétis *père* was in the middle of transcribing a movement from Ockeghem's Mass "Ad omnem tonum" when death finally claimed him.<sup>3</sup>) But it probably didn't matter. Over the following decades, the five published volumes of his *Histoire générale* would be almost completely eclipsed by the writings of Gevaert, Ambros, Spitta, Riemann, Wolf, Ludwig, and a number of other nineteenth-century specialists in the burgeoning discipline of historical musicology.

It is surely understandable why these scholars would pass his research by, with all his wildly generalized arguments, his many dubious claims, his sloppy scholarship—not to mention whispers of plagiarism and fabrication.

For Ernest Reyer, "There was never a writer who was so full of contradictions and his arguments so full of errors."<sup>4</sup> It is no wonder, perhaps, that the French musicologist Pierre Aubry was uncompromising in his criticism of his predecessor as a "charlatan" and "mystifier" of musical scholarship, one who vastly overrated his own mastery of languages, history, and paleography and who above all lacked the critical acumen, discipline, and humility necessary to be a true historian.<sup>5</sup> Julien Tiersot felt that Fétis's efforts in explaining the theory and practice of much non-Western music was equally deplorable, calling the opening volumes of his *Histoire generale* "the worst thing he ever wrote." He elaborated his critique by describing Fétis's chapters on Arabic music as

made up of the most heteroclitic sources, a mishmash of notes pilfered from right and left, without any direct impression, any personal observation, the whole intermingled with his usual chimerical conceptions of scales, modes, rhythms, and form, all under the pretext of history, a tableau as fantastic as could be created by the most hypothetical imagination.<sup>6</sup>

One might think that Fétis's theory of tonality might have fared better given the wide dissemination it achieved. But even here, the story was not so simple. Despite the fact that his *Traité* continued to be published in new editions through the first decade of the twentieth century, Fétis's theory of harmony cannot be said to have exercised much influence after his death. There was no robust school of "Fétisian" pedagogy that can be traced in the Conservatoire or elsewhere. How could it have been otherwise? With its unsystematic amalgamation of ideas drawn from sources a century earlier (premises of partimento practice infused with bits of harmonic theory drawn from Rameau, Kirnberger, Catel, and Choron), it hardly seemed to speak to the interests of a contemporary composer. Still less could it serve as a practical textbook for any beginning student wishing to learn basic harmonic skills given its unsystematic, descriptive pedagogy.

While his theories of *tonalité* continued to receive attention by musicians after his death, it was rarely without criticism. Fétis's reduction of all musical systems to simple inventories of scale systems was soon called out by ethnomusicologists as balefully procrustean.<sup>7</sup> And then there were his claims about the metaphysical nature of tonality. In a monograph on the history of harmonic theory published in 1917, the English writer Matthew Shirlaw mocked Fétis's theory as containing some of the most incredible overbaked nonsense to be found in a discipline that had plenty of overbaked



nonsense. "Anything more ill-considered, more inadequate than Fétis's 'metaphysical' theory of harmony based on the principle of tonality, which he himself does not understand, and is unable to explain, it would be difficult to conceive."<sup>8</sup>

Fétis certainly did not help himself in his many dealings with his fellow scholars. Over the previous chapters, we have seen ample evidence of his self-pride, pugnacity, and condescension toward those who would take exception to his arguments. His own musical tastes, as we have seen, became evermore conservative; he won few friends among composers of his day by lecturing them—and be it remembered, also Beethoven and Mozart—for their failings as harmonists possessing good judgement and taste. Liszt put his finger on the paradox in noting the Janus-faced qualities of Fétis as both a progressive and a reactionary. In a letter he wrote in 1867 to Étienne Repos (director of the *Revue de musique sacrée*), he observed,

Of all the theorists who are known to me, Mr. Fétis is the one who has best apprehended and defined the progress of harmony and rhythm in music; on principal points such as these, I flatter myself to remain in perfect agreement with him. Beyond this, he must forgive me for escaping in various ways the [conservative] critical school whose erring ways he recommends. According to his theory, art ought to progress, develop, be enriched, and take on new forms; but in practice he hesitates, and rebels—and at the very least would require that the "transformation" proceeded without disturbing existing practices in the least, so as to charm everyone straightaway. Would to Heaven that it happened like that!<sup>9</sup>

And finally there was Fétis's turn to the most offensive doctrines of racial biology in his later years that make many pages of his *Histoire* scarcely readable today. It may be hard to see how we might salvage this complicated, problematic individual and his equally complicated, problematic scholarly legacy.

Which is not to say he lacked defenders. Even among some of the scholars with whom he quarreled, a few of them expressed respect and admiration for his work. Gevaert, whom we have seen debating with Fétis on any number of occasions, was able to step back and offer a more dispassionate assessment of his predecessor on the centenary of his birth.<sup>10</sup> Of course Fétis made mistakes (and here I am paraphrasing Gevaert's lengthy tribute). Little that he wrote could today pass without some objection or at least serious qualification. Fétis had a habit of generalizing too much, trying to push his theses too far; in short, he succumbed in his synthesizing zeal to the "esprit

systematique" that befalls many a great mind. But for all this, Gevaert continued, it would be ungenerous and churlish of us not too recognize his profound erudition, his pioneering work as historian, and the endless number of brilliant insights and ideas he brought forth. After all, there were few broad shoulders Fétis could stand on when trying to piece together a truly universal history of music. To be sure, our polymath could be hot headed and irascible at times. (This was a generous concession for a man who himself was notoriously quick-tempered.) But Fétis could also be generous to his friends, Gevaert concluded, having experienced the "excellence of his character" many times.

For all its many overreaching claims and unfounded deductions, Fétis's scholarship still amazes by its originality and audacity. Even Tiersot had to concede that one cannot fail to be impressed by the "conceptual grandeur" that is the *Histoire generale*.<sup>11</sup> Most amazing of all, though, is the sheer fecundity of Fétis's ever active pen. In an age known for its prolific writers, there were few who were able to keep up with this *homo scribens* as Remy Campos aptly calls him.<sup>12</sup>

Over his many publications, only a fraction of which we have sampled in this book, Fétis dared to encompass the whole encyclopedic range of music from all periods and all cultures. Never had a musicologist offered such a compelling, unifying vision of music and its history. Perhaps the only other music scholar in the nineteenth century who is comparable with Fétis in the scope of his research would be Hugo Riemann (who incidentally based his historical understanding of music on a theory of tonality that was equally audacious in its metaphysical and scientific claims).

If there are countless pages among Fétis's publications in which we can identify errors of research and judgement, there are also many pages full of insight regarding tonality that seemed to have won posthumous endorsement. Fétis's conviction regarding the role of the tritone in defining key centers within the system of modern tonality has become a bedrock of most theories of tonal harmony. Moreover, his claim that the appellative tendency of the leading tone (and perforce, the dominant seventh chord) was something a listener intuited rather than being immanent in the notes themselves conforms surprisingly well to many current theories of tonal cognition in which the "qualia" of scale degree sensation is a cognitive phenomenon that experienced listeners learn to hear through repetition.<sup>13</sup> Much recent transformational theory also intersects in suggestive ways with Fétis's ideas. For instance, Steven Rings has written of a transformational "attitude" toward tonality in which a listener intuits or anticipates tonal acts such that they become essentially "tonal intentions."<sup>14</sup> Fétis's modeling of tonality through

various species of scale orderings might also be seen as a progenitor to the work of several present contemporary theorists such as Dimitri Tymoczko.<sup>15</sup> And of course there is the omnitonic “order” that Fétis first envisioned in the 1830s (if not before) that turned out to be a surprisingly prescient description of harmonic and modulatory practices that would be heard a half century later.

Yet as true as any of this may be, we are not going to rehabilitate Fétis and his writings simply by crowning him as a seer of certain compositional developments in the late nineteenth century let alone music-theoretical developments in the twenty-first century. At the same time, it would be a mistake to dismiss all his writings just because some of his evidence or deductions can be refuted today. Fétis’s notion of tonality, we might say, is stronger than any particular argument he made on its behalf. Though there is no consensus on its precise meaning or scope, the concept has still proved to be valuable, perhaps indispensable, for generations of musicians.

Tiersot was certainly right when he assessed much of Fétis’s scholarship as the product of an overactive “hypothetical imagination.” Fétis himself might well have agreed. In a striking essay that he wrote in 1853 serialized in the *RGM*, Fétis offered a retrospective “testament” to his work as a scholar, defending himself from the accusation of building a sand castle on the unstable foundation of hypotheses. “A hypothesis,” Fétis reminds his readers, “is often the only road open to a historian to arrive at truth.” This is especially so for a discipline such as historical musicology, where so much evidence has been lost to time:

I understand a hypothesis as based on the nature of the thing through analogy, probabilities, and certain givens which, when separated from each other are of little significance, but when brought together and analyzed with discernment acquire value and give weight through conjecture. In works of this kind, truth is always a hypothesis at the beginning. I thus cannot accept the reproach often made against me when I have recourse to this means in dealing with the history of ancient music. For I am the first to declare that whole history of music in this earliest and longest epoch is entirely hypothetical; but I have acquired the conviction, through the relations that I have drawn between things, that my hypotheses are the only possible truth.<sup>16</sup>

To be sure, many of the hypotheses Fétis proposed changed, were modified, and were often entirely abandoned over the course of his long career. How could it be otherwise for one who dared to tackle such ambitious top-

ics in his countless publications? In his mediations on the nature of musical tonality, we have seen that his first conceptions were embedded in idealist metaphysics, while later in his life he turned increasingly to biology and ethnology for answers. But we ought not to assume that he thought there was any fundamental incompatibility between these two positions. After all, there was always something of a biological determinism lurking in his earliest formations just as there remained an element of metaphysics in his later racial arguments.<sup>17</sup> The differences may perhaps best be understood as shifts of emphasis. In his earlier work, Fétis attempted to account for the variances of tonality he observed over time, while in his later writings he tried to understand these differences over space. What is clear is that Fétis believed to be living at a unique moment in history where philosophy and science had advanced enough so that it was finally possible to formulate some audacious hypotheses regarding the tonal forces that had helped shape the diversities of music he was able to study as a historian, ethnologist, and theorist.

In a famous aphorism that closes the preface to his *Philosophy of Right*, Hegel wrote that the “owl of Minerva spreads its wings only with the falling of the dusk.”<sup>18</sup> Only in the twilight of an age can the philosopher finally glimpse the long path history has trod to be where it is. Hegel believed he was living in the autumn of world history. While this history may seem to have culminated in the Prussian trinity of state, church, and university, it was a melancholic triumph for Hegel. History had seemingly traveled from the distant East to arrive at its telos in the manhood of the Germanic people from which it will inevitably decay. Fétis saw tonality as one of the most precious inheritances from the East that had also reached its maturity and perfection in his own day and in his own European homeland. But that perfection, too, faced a gloomy future given the encroaching omnitonic practice of his contemporaries. As cheerless as he may have found this eventuality to be, he was consoled by the knowledge that it could not be otherwise. François-Joseph Fétis lived in an age that for the first time believed it was discovering the most fundamental laws that had guided the history of the world. It was his vocation—his destiny—to be the individual who was to reveal these laws as they applied to music.



## ACKNOWLEDGMENTS

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Some twenty-five years ago, I wrote a short article on Fétis and his theory of tonality for a collection of essays that Ian Bent was putting together on “Music Theory and Romanticism.” Having until that point concentrated my work primarily on the eighteenth century, it was something of a refreshing diversion for me. I had always been fascinated by Fétis’s writings since I was first introduced to them in graduate school in a seminar taught by David Lewin. So it was a welcome opportunity to get to know this fascinating and enigmatic figure a little better. (Shards of that first paper will be found scattered in chapter 1 of the present book.) At the time, I certainly did not anticipate that I would have much more to say on the subject, and I returned to my more comfortable home in the eighteenth century for a number of subsequent scholarly projects.

But early in 2008, I was invited to a conference at King’s College in London organized by Daniel Chua titled “Tonality in Perspective” and encouraged to say something more about Fétis. I protested that I had pretty much exhausted what I knew in that one article. But why turn down a trip to London in the spring? I agreed to look at it again and see whether there was not something more I might add. It was at that point—as I began to sketch out my paper to read at this conference—that I realized that perhaps there was more to say. So I suppose I can credit (or blame, as the case may be) Daniel for turning my attention back to the subject of Fétis and tonality. The result is this book.

But there were many others I must thank for their support over the past ten years. I should credit foremost the help of several funding agencies and institutions that have supported my research. A residential fellowship from the Wissenschaftskolleg in Berlin, Germany, for the year 2011–2012 was the first major opportunity I had to start concentrated work on the book. During

a glorious year spent with my family in the lovely “Wiko” campus in Grunewald, I was able to sketch out drafts of the first half of this book. Numerous fellows at Wiko and colleagues from various German universities gave me invaluable help at this early stage, including Hermann Danuser, Werner Grünzweig, Ludwig Holtmeier, Philip Kitcher, Reinhart Meyer-Kalkus, Albrecht Riethmüller, Dörte Schmidt, Gesine Schroeder, and Jan Sprick. With particular pleasure I remember many animated discussions during our weekly evening meals with the brilliant pianist Alfred Brendel—also a fellow that year—on questions of musical tonality.

Over the following years, I continued work on my book, though at a slower pace than I would have wished. A seminar I taught on the topic of Fétis and tonality in 2014 kept my interest simmering, and I thank my graduate students for their forbearance in allowing me to indulge in my growing obsession with this subject.

I was finally able to complete a full draft of my book in 2015–2016 thanks to another sabbatical fellowship, this time with support from the American Council of Learned Societies (ACLS). For the generous funding of both the Wissenschaftskolleg and the ACLS, I am humbly grateful. Without these two years of concentrated work, I simply would not have had the chance to compose a book that changed and grew to proportions I could scarcely have imagined at the start. Additional generous support for underwriting the production costs of this book came from the Division of Humanities at the University of Chicago led by my distinguished colleague Anne Walters Robertson.

I should also not fail to mention the many libraries and librarians who have helped me in my research. The staff of the library in the Royal Conservatory of Music in Brussels (Koninklijk Conservatorium Brussel) made available a large number of documents from the Fétis archive during several trips to that city. Also of critical help was Marie Cornaz, curator at the Royal Library (Koninklijke Bibliotheek), where the bulk of Fétis’s great library is housed. On this side of the Atlantic, I was lucky to be able to make regular use of the Newberry Library in Chicago, with its incomparable collections of books and journals related to nineteenth-century music.

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It has been a special pleasure to work with the professional staff at the University of Chicago Press in the production of this book. Katherine Hansell was the first music editor I spoke to there about this book, and she was an earlier supporter of the project. When Marta Tonegutti took over as music editor, she did not drop a beat and helped to shepherd the text through final production with characteristic cheerfulness and enthusiasm. Steve LaRue served as copy editor for my final text, and I am deeply grateful for his many wise suggestions for rewording some of my more gnarly sentences (not to mention his sharp eyes that caught more than one typo or inconsistent citation).

Finally, I end by acknowledging my deepest debt and thanks to my family. My wife Clara has from the beginning been unwavering in her support. She has always found a way to offer just the right mixture of encouragement, prodding, and consolation when I needed it. Without her help, I know the publication of this book would have taken longer than it already has. And as for our children, Eddie and Katharine, you've both been inspirations of energy and creativity to me beyond words, even as you caused unforgettable moments of hilarity and distraction. It is to the three of you that I dedicate this book with gratitude and love.

Chicago, December 5, 2017





## NOTES

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### PROLOGUE

1. Webern, *Path to the New Music*, 47.
2. Wuorinen, *Simple Composition*, 3.
3. Bernstein, *Unanswered Question*, 422, 419.
4. The bibliography on this story of musical modernism and tonality is obviously vast. One helpful orientation is found in Whitesell, "Twentieth-Century Tonality." See also the thoughtful entry by Hyer on "Tonality" in Christensen, *CHWMT*, 726–52.
5. To cite just three recent examples, see Lerdahl, *Tonal Pitch Space*; Rings, *Tonality and Transformation*; and Tymoczko, *Geometry of Music*.
6. White, *Metahistory*.
7. Hyer, "Tonality," 745.

### CHAPTER ONE

1. The lectures were first announced in *RGM* 9, no. 7 (February 18, 1844): 54. There it was reported that the "renowned professor . . . whose many writings concerning all aspects of the history and theory of music are esteemed throughout Europe" would offer a "free course on the history and theory of harmony" that would surely be of "interest to all artists and lovers of music." (Unless otherwise noted, all translations are my own.) While I have taken some literary license in my description here, ample evidence regarding the acquaintance of leading musicians, critics, clerics, and scholars of the time with Fétis's ideas can be documented (and will be further presented over the following chapters of this study). According to one critic who was present (*RGM* 11, no. 8 [February 25, 1844]: 68), "The elite of artists, amateurs and many writers and scholars" showed up for the first two lectures. They proved such an "immense success" that the following two lectures generated interest that was "even more animated." On Liszt's presence at one of Fétis's earlier lectures, see p. 321n29 in chapter 7. On the numbers of attendees at these lectures, I rely—with a grain of salt—on Fétis's own reminiscences: "Many persons can still recall the emotions produced by this course upon an audience of some seven to eight hundred artists, professors and students of the conservatory" (*RGM* 20, no. 37 [September 11, 1853]: 314).

2. The main arguments of the four lectures were summarized by Fétis himself in several follow-up articles in *RGM* [11, no. 11 [March 17, 1844]; 11, no. 14 [April 7, 1844]; and 11, no. 17 [April 28, 1844]]. The presentation of the lectures was timed to coincide with the publication of Fétis's *Traité*, which was to be released by Schlesinger one month later. But the final version of Fétis's lecture was not to be found in that publication; it would be seen only five years later as the new preface to the third edition of his *Traité de l'harmonie* from 1849.

3. We should note that this was actually the second major series of public lectures that Fétis had delivered on his theory of tonality. Twelve years earlier, he had offered the public a related "Cours de philosophie musicale de l'histoire de la musique" that was also attended by "members of the Academy of Sciences of the Institute, the majority of the conservatory professors, and the most famous artists," as he later boasted (*Traité*, xiii). (We know Liszt attended this series of lectures.) In the intervening years, Fétis had refined his theory considerably while his fame as a scholar had only increased, thus lending to this second series of lectures an even greater air of anticipation and public attention.

4. For a fuller account of Choron's many activities, see Simms, "Alexandre Choron" as well as Meidhof, *Alexandre Étienne Chorons Akkordlehre*, 3–21.

5. "Sommaire de l'histoire de la musique," contained in Choron and Fayolle, *Dictionnaire historique des musiciens*, xi–lxvi.

6. See his *Considération sur la nécessité de rétablir le chant de l'Église de Rome dans toutes les églises de l'empire* of 1811.

7. To this end, in 1811 he penned a small manual on plainchant for the use of local parishes: *Méthode élémentaire de musique et de plain-chant*.

8. On Choron's school and his public concerts, see Ellis, *Interpreting the Musical Past*, 25–28. Also see Simms, "Alexandre Choron," 26 ff.

9. Choron and Fayolle, *Dictionnaire historique des musiciens*, 1:xxxvii.

10. Choron and Fayolle, xxxviii.

11. Choron, *Principes de composition des écoles d'Italie*, 1:47.

12. Choron and Fayolle, *Dictionnaire historique des musiciens*, 1:xxxviii.

13. Choron and Fayolle, 2:63.

14. Choron and Fayolle, 1:199.

15. Choron and Fayolle, xxxviii.

16. Another scholarly study of music that appeared at precisely the same time as Choron's might also be mentioned here, as it, too, emphasized the diversity of scale systems to be found throughout history: Salette, *Considérations sur les divers systèmes de la musique ancienne et moderne*. For more on Choron's theory of tonality and its influence on Fétis, see the pioneering article by Simms, "Choron, Fétis, and the Theory of Tonality" and Meidhof, *Alexandre Étienne Chorons Akkordlehre*, 239–56.

17. A useful guide to the varying historical usages of the term *tonalité* is found in Beiche, "Tonalität"; for the references to the theorists just mentioned, see especially page 3. Also see Helbing, "Tonalität in der französischsprachigen Musiktheorie zwischen Rameau und Fétis."

18. Fétis reported in one letter from 1838 that he had known Choron for over twenty years of "intimate friendship." Letter to Eugène Troupenas, October 17, 1838; *Correspondance*, #38-5, 134.

19. Meidhof, *Alexandre Étienne Chorons Akkordlehre*, 239 ff.

20. The standard and indispensable source for information on Fétis's life is Wangermée, *François-Joseph Fétis: Musicologue et compositeur*. More recently there has appeared Campos, *François-Joseph Fétis*. Campos's magnificent and eclectic work is full of desultory information about Fétis's many activities as a scholar, critic, composer, conductor, administrator, and general musical entrepreneur along with ample excerpts and illustrations from his many writings. Fétis himself provided autobiographical details of his life several times, first in his own entries in the two editions of his *Biographie universelle* (s.v. "Fétis"), and second in a lengthy autographed *mémoire* of his childhood that was never published and is found in the Brussels archive, reprinted in Campos, *François-Joseph Fétis* as "Souvenirs d'un vieux musicien: Mes premières années, 1784–98," 706–30.

21. Jean-Baptiste Rey was a cellist in the opera who wrote a harmony text that is heavily based on the teachings of Rameau (*Exposition élémentaire de l'harmonie*). He is not to be confused with a V. F. S. Rey, a *verificateur* in Paris who wrote a number of minor manuals of harmony and theory beginning in the 1790s, also based on the teachings of Rameau (*BU*<sup>2</sup>, 7:235).

22. *Méthode élémentaire et abrégée d'harmonie et d'accompagnement*.

23. *Méthode*, 12–23. In his later harmonic writings, he would add to these modifications that of "alteration" by which a chord tone is chromatically altered (another key feature of Rameau's theory). For a helpful survey of French harmonic pedagogy at the beginning of the nineteenth century, see Groth, *Die französische Kompositionslehre des 19. Jahrhunderts*, 26–58.

24. *Méthode*, 2nd ed., 2. With the exception of this preface, the two editions are otherwise identical.

25. *Traité du contrepoint et de la fugue*, 68. In the same section, Fétis recounts for the first time how Monteverdi inaugurated this epic change to modern tonality in his fifth book of madrigals published "in 1590" through the use of an unprepared dominant seventh chord (69).

26. "Rapport de la section de musique de l'académie royale des beaux-arts," September 4, 1824; reprinted in the *Traité du contrepoint et de la fugue*, 1. The committee members were Lesueur, Catel, Boueldieu, Berton, and Cherubini.

27. See Ellis, *Music Criticism in Nineteenth-Century France*, for a comprehensive history of this journal, especially pages 33–45.

28. He claimed (*BU*<sup>2</sup>, 3:232) that he alone was responsible for over eight thousand pages of text published in the journal's first five years!

29. Review of Victor Derode, *Introduction à l'étude de l'harmonie* in *RM* 3 (1828): 217–23, 321–27.

30. Derode, *Introduction à l'étude de l'harmonie*, 321–42.

31. Fétis, 221–22. In speaking of this intuition as resulting from "our organization," Fétis is referencing possible biological factors that would affect our cognitive capacity for tonality. I will pick up this point later in the chapter.

32. Fétis, 325.

33. An earlier version of this preface is to be found in *RGM* 11, no. 11 (March 17, 1844): 89–91, which we recall contained a summary of his lectures from the same year (see note 2 above).

34. *Traité*, xi; *Treatise*, li–lii (translation slightly modified). Here, as in most subsequent citations from Fétis's *Traité*, I will give the pagination from the third (1849) edition as well from Peter Landey's 2008 English translation.

35. *RGM* 7, no. 56 (October 4, 1840): 481; cited in *Treatise*, xxv (translation slightly modified).

36. We just heard Choron use the term *appellative* to describe the attractive power of the leading tone (p. 4). But it is possible to trace the term even further back in French music theory. Fétis's conservatory teacher, Rey, wrote that the leading tone "calls for (*appellant*) the tonic, much as the fourth scale degree does the third" (*Exposition élémentaire de l'harmonie*, 6). The first theorist I am aware of who used the term is actually Anton Bemetzrieder, who already in 1771 cited the term—perhaps through the inspiration of Diderot—to describe the tendency of any dissonance toward resolution. Anton Bemetzrieder, *Leçons de clavecin et principes de l'harmonie*, 336. For more on Bemetzrieder and his "loi des appels," see Christensen, "Bemetzrieder's Dream," 39–56.

37. For further explanation of these two models of tonal motion, see Christensen, *Rameau and Musical Thought*, 185–90.

38. *Traité*, 21. As mentioned earlier, Fétis seemed to have gotten this idea from Choron, who considered the tritone a species of consonance since it can be introduced unprepared in certain harmonic contexts. But Fétis could also have learned this idea from any number of eighteenth-century partimento instructions where it was a standard part of the pedagogy. For example, in his 1775 *Regole*, Fedele Fenaroli illustrated many examples of an unprepared diminished fifth in his exercises, even labeling it (as would Sabbatini) a consonance ("la consonanza di quinta falsa"): *Regole musicali*, 21.

39. Gurlitt, "Franz-Joseph Fétis," 134.

40. *Correspondance*, #38-5, 135. It would be odd if Fétis had not learned about Kant and idealism through the many other intellectual luminaries in Paris who were beginning to read and teach his philosophy. Wroński was already regarded as something of an eccentric at this point, harboring quite outlandish messianic ideas. We will hear a bit more about Wroński and his surprising influence on a group of music-theory disciples in chapter 6.

41. In this letter, Fétis identifies the following writings as having been particularly catalytic to his own ideas: Kant's three great Critiques, Fichte's *The Vocation of Man* (1800), and three works of Schelling (*On the Unconditional in Human Knowledge*, 1795; the *System of Transcendental Idealism*, 1800; and *Judgment of the Philosophy of Victor Cousin*, 1834). For more on Fétis's metaphysical turn, see the important and groundbreaking article by Rosalie Schellhous, "Fétis's *Tonality* as a Metaphysical Principle."

42. *HGM*, 1:ii. Leibniz's famous quip "Musica est exercitium arithmeticae occultum nescientis se numerare animi"—or as Fétis translated it, "La musique est un calcul secret que l'âme fait à son insu"—was one widely quoted among theoreticians in the eighteenth century. Fétis also discusses the implications of this quote further in his 1838 essay "L'état actuel de l'esthétique musicale," which is partially translated in le Hurray and Day, *Music and Aesthetics*, 498–512.

43. David Lewin has pointed out that the obvious literary model for Fétis here was Rousseau, who famously reported having a similar revelation in 1751 when contemplating the prize question posed by the Dijon *académie* concerning the supposed progress of the arts and sciences. See Lewin, "Concerning the Inspired Revelation of F. J. Fétis," 7. For

another striking example of Fétis borrowing the poetic language of Rousseau, see Ceulemans, “Fétis and the Idea of Progress in Music,” 164.

44. For the importance of German idealism to the historiographical practices of Quinet and Michelet, see Crossley, *French Historians and Romanticism*, especially chapters 1 and 2. Comte’s early engagement with Hegel is discussed in Pickering, “New Evidence.”

45. Ellis, *Music Criticism in Nineteenth-Century France*, 35–36.

46. On Cousin’s engagement with Hegel, see Cornelius, *Die Geschichtslehre Victor Cousins*.

47. Schellhaus, “Fétis’s *Tonality* as a Metaphysical Principle,” 231.

48. Not that Fétis was the only French musician to fall under the sway of German philosophy. Gaëlle Loisel has emphasized the importance of Kant in the general development of French Romantic thought in music during the nineteenth century: “Kant et l’émergence d’un Discours romantique sur la musique.” And of course Hegel was a major influence on German musicologists such as Kiesewetter, Brendel, and Ambros in the nineteenth century (Kirkman, “Under Such Heavy Chains,” esp. 102–12).

49. See, for example, his brief overview of attempts to theorize harmony in the seventeenth century leading up to Rameau in *RM* 1, no. 10 (April 1827): 250–56. The *Biographie universelle*, we should note, included lengthy articles on dozens of music theorists, many far greater in substance than the entries accorded composers or performers.

50. For a more expansive exploration of this theme, see Christensen, “Fétis and Emerging Tonal Consciousness,” 42–44.

51. From the “*Traité de la philosophie de la musique*,” an ambitious encyclopedic compendium of musical knowledge that Fétis outlined in manuscript in the 1850s but never lived to complete. Quoted in Wangermée, *François-Joseph Fétis: Musicologue et compositeur*, 319. Also see the remarks by Fétis in the *Traité*, 21–22, 59.

52. We will soon see, though, that Fétis is hardly consistent in adhering to this liberal dictum. On his many vacillations regarding this statement, see Ceulemans, “Fétis and the Idea of Progress in Music.”

53. *Traité*, xiv; *Treatise*, liii. Leonhard Euler’s theory of consonance suavity angered Fétis so strongly precisely for this reason. His critique of Euler is found in the *Esquisse*, 69–84. It is indicative of his ire, perhaps, that this is by far the longest and most critical discussion Fétis grants to any individual theorist in the monograph.

54. *Traité*, xxxi. See also Jenni, “Fétis and le sens musical.” Fétis credits this double process to Kant’s notions of “receptivity” and “spontaneity.” Ironically, though, Kant himself did not grant music this later stage of intellectualization, insisting that it remained at the level of mere sensory stimulation, a failing that Fétis would repeatedly chastise Kant for (*RM* 9, no. 23 [June 7, 1835]: 178).

55. The principal text relevant here is Hegel’s “Lectures on the Philosophy of History,” delivered in 1822 in Berlin (translated in *Reason in History*). It was a text that Cousin frequently lectured on in Paris during the 1820s (Cornelius, *Die Geschichtslehre Victor Cousins*, 36 ff.).

56. *RM* 6, no. 18 (June 2, 1832): 141. Fétis was actually never quite sure of this date; we will see in chapter 3 (p. 292n1) that Fétis elsewhere proposed a number of other dates for Monteverdi’s fifth book of madrigals.

57. *Correspondance*, #38-5, 137.

58. Jenni, "Fétis and le sens musical," 154.

59. Werner, *Philosophy of F. W. J. Schelling*, 7 ff. Interestingly, Fétis in later years credited Schelling as his "greatest inspiration" for his idealist conception of tonality; *RGM* 2, no. 37 (September 15, 1844): 254.

60. Hegel, *Reason in History*, 87.

61. This perhaps clarifies Fétis's admonition that "art does not progress, it transforms." The kind of progress to which Fétis makes disparaging reference here is the utopic optimism of an Enlightenment philosopher such as Condorcet. But this did not preclude a teleological model of evolution. Fétis clarified somewhat this point when he rephrased his creed as follows: "The history of art suggests a progressive development in its forms, and advancement in its means, but only a transformation of its goal, which is to move" (*BU*<sup>2</sup>, 3:233). This point is reinforced in the article of Ceulemans, "Fétis and the Idea of Progress in Music."

62. Indeed as Fétis's own *Traité* demonstrates, it is sometimes necessary for the theorist to guide the composer in recognizing the laws of tonality and, on occasion, to correct their music. Fétis was not hesitant to chastise even masters such as Monteverdi, Mozart, or Beethoven for lapses of tonal sensibility and to offer his own "improvements" of their compositions. We will study some of Fétis's corrections in chapter 6.

63. Fétis's discussion of these theorists is found in the fourth book of his *Traité*, 201–54. We will consider a number of his arguments against his predecessors in chapter 6.

## CHAPTER TWO

1. The history of the Solesmes reforms is detailed in many sources. Perhaps the most comprehensive can be found in Combe, *Histoire de la restauration du chant grégorien*. On some of the aesthetic and social forces lurking behind the Solesmes reforms, see Bergeron, *Decadent Enchantments*.

2. Not that there was no intrigue and politics involved in the Solesmes victory. For this side of the story, see Ellis, *Politics of Plainchant in Fin-de-siècle France*.

3. For a short history of the pre-Solesmes chant reforms, see Wangermée, "Avant Solesmes," and Ceulemans, "Trois figures hennuyères de la restauration du plain-chant."

4. One of the few English-language studies to explore the importance of Fétis's theory of tonality to French plainchant reform in the early nineteenth century is found in Jean Littlejohn, "Fétis's Theory of Harmony in Nineteenth-Century Europe," esp. 158–248.

5. Choron and Fayolle, *Dictionnaire historique des musiciens*, 1:20.

6. Fétis, *Méthode élémentaire de plain-chant*.

7. See d'Ortigue, "Des Progrès de l'opinion en musique," *RGM* 2, no. 51 (December 20, 1833): 415.

8. The adjective is from Fétis, *Méthode élémentaire de plain-chant*, xi.

9. Danjou, "L'État et l'avenir du chant ecclésiastique en France." *RMRPC* I (1844): 10.

10. *Mémoire sur la nouvelle édition du graduel et de l'antiphonaire*, 40.

11. Cloet, *Mémoire sur le choix des livres de chant liturgique*.

12. Choron, *Considerations*, 11.

13. Choron, 13.

14. Fétis, *Méthode élémentaire de plain-chant*, vi.
15. D'Ortigue, *Dictionnaire liturgique*, s.v. "Tonalité," col. 1467.
16. Bisaro, "Une tradition en chantier."
17. It was actually an editorial practice with a long pedigree. As early as the seventeenth century, post-Tridentine chant editors such as Guillaume Gabriel Nivers and Henri Dumont were including sharps in some of their editions of plainsong, additions that a contemporary scholar has concluded could only be an attempt to update the tonality of the music to meet current tastes. See Karp, *Introduction to the Post-Tridentine Mass Proper*, 1:209, 211–12.
18. For more on Miné, see Ochse, *Organists and Organ Playing in Nineteenth-Century France and Belgium*, 31–2.
19. Danjou's journal deserves a brief mention here. The *Revue de la musique religieuse, populaire et classique* began publication in 1845 and for the following few years became the most important forum in France for all serious discussion of historical chant practice. The inclusion of "popular" and "classical" in the title of the journal might suggest a more ecumenical perspective than Danjou intended, but he was not at all concerned with popular music in any vernacular sense, still less with instrumental music from Vienna in the late eighteenth century. It was the venerable chant repertoire of the church that was his concern. Chant, Danjou argued in the preface to his first volume, was "popular" and "classical" in the most authentic senses of both terms. It was the urgent task of his day to reclaim the great musical patrimony of the church from its decadent state and return it to its classical purity that was from its inception also the popular—that is, "common"—music of the pious folk (*RMRPC* 1 [1845]: 9).
20. A story comprehensively recounted in Bisaro, "La plume ou le goupillon?"
21. Viret, *Le chant grégorien et la tradition grégorienne*.
22. *RMRPC* 1 (1845): 401.
23. Mahé, *Essai sur les antiquités du département du Morbihan*, 362–75.
24. Bogaraerts and Duval, *Études sur les livres choraux*, 22.
25. *Principes élémentaires du plain chant*, 15.
26. *RGM* 12, no. 5 (February 9, 1845): 53.
27. Dellioux, *Méthode théorique et pratique de plain-chant*, 62.
28. *Mémoire sur la nouvelle édition du graduel et de l'antiphonaire*, 43.
29. *RMRPC* 2 (1846): 130. Part of Danjou's anxiety about this particular example undoubtedly also stemmed from the fact that the "Moses Prayer" enjoyed such extraordinary popularity among the French public as a salon favorite. Let alone that the opera itself was a kind of "opéra sacré"—a genre that Danjou found as offensive as it was oxymoronic—the tune of "Dal tuo stellato soglio" was used by both Paganini and Liszt as a theme for sets of virtuosic variations that helped to launch both of their careers. Irrespective of any chromatic elements, then, it was clearly a piece that was irredeemably tainted by secularism in Danjou's jaundiced view.
30. The origins of this anxiety concerning the semitone may have a longer history than we think. Elizabeth Eva Leach has argued that already in the Middle Ages theorists had imputed feminine qualities to the semitone (a trope itself drawn from Greek theory and the chromatic genus). When used in certain "directed progressions" from the fourteenth century, she has argued, the semitone was perceived by some writers as taking on a



strikingly stimulative, lascivious, and even dangerously erotic quality (Leach, “Gendering the Semitone”). While much of the historical evidence supporting her argument has been brought into serious question (see Fuller, “Concerning Gendered Discourse in Medieval Music Theory”), there is little doubt that theorists—and composers—from the later Middle Ages did find chromaticism strongly evocative as a compositional element (Brothers, *Chromatic Beauty in the Late Medieval Chanson*).

31. Quoted in Sunol, *Text Book of Gregorian Chant*, 39.

32. “Du demi-ton dans le plain-chant,” *RMRPC* 1 (1845): 17–31, 96–114.

33. Preface, *RMRPC* 1 (1845): 14.

34. “Faux Bourdon” is not used here in the sense known to musicologists to describe improvisatory discant from the fifteenth century involving parallel  $\frac{5}{4}$  harmonies. The term had been appropriated by musicians in the nineteenth century to refer to a kind of rhythmically free recitation of chant over sustained consonant harmonies (either played by the organist or sung by a chorus in four parts). See the entry “Faux Bourdon” in d’Ortigue’s *Dictionnaire liturgique*, col. 605. See also Fétis’s article on “Faux-Bourdons des Psaumes,” *RMRPC* 1 (1845): 496–506.

35. Fétis, *Méthode élémentaire de plain-chant*, 30.

36. Palisca, *Hucbald, Guido, and John on Music*, 64.

37. Palisca, 66; translation slightly modified.

38. The key source here is the so-called Berkeley manuscript (“Quoniam in antelapsis temporibus”) dating from about 1375. Here for the first time we find chant notations using the b-quadratum sign as a transposable sharp. For more on the history of chromaticism in late medieval chant practice and theory, see Atkinson, *Critical Nexus*, 234–58; and Pesce, *Affinities and Medieval Transposition*, 80–97.

39. Gerbert, *Scriptores ecclesiastici de musica*, 2:11. “Quae subductio appellatur diesis, et medietas sequentis semitonii, sicut semitonium est medietas sequentis toni.”

40. The reference is to the Greek Greater Perfect System beginning on A (“a qua omnes antique fecere principium”—Gerbert, 2:4). While Guido adds to this scale a lower Gamma (G), the *proslambenomenos* (“a modernis adiunctum”), it is the letter A that is counted here as the “first note” of the gamut.

41. For example, see Lambillotte, *Esthétique, théorie et pratique du chant grégorien*, 192–96 (translation and commentary of chap. 10 from the *Micrologus*); and Fraselle and Germain, *Études et recherches sur la théorie et l’histoire du chant grégorien*, 147–90: “De la subduction dans le chant grégorien.”

42. Fétis, “Rapport sur l’emploi du quart de ton dans le chant grégorien au moyen âge.”

43. The source for the discussion of *subductio* is quite likely the Benedictine monk Engelbert of Admont (ca. 1250–1331), who in several places within his chant treatise discussed *subductio* (as a Latin translation of the Greek *diesis*). In medieval Latin, *subductio* (from the verb *subducere*, to take away or withdraw) is a term usually found in mathematical texts particularly in regard to subtraction. Fétis’s hunch concerning the late dating of this passage is confirmed by Waesberghe, who has identified this interpolation as stemming from a group of manuscripts dating from the fifteenth century. Waesberghe, ed., *Guidonis aretini micrologus*, 135.

44. The editors of the Reims-Cambrai edition noted, however, that musicians in “Portugal, Turin, and Italy” would normally flatten the B of this same passage in order to avoid

the tritone rather than raise the F (*Mémoire sur la nouvelle édition du graduel et de l'antiphonaire*, 45).

45. Obviously, Fétis was taking a practice of *ficta* associated with normally vertical intervals in polyphonic music and applying this retroactively to monophonic chant. For we do have obvious evidence that by the later fifteenth century, singers reading polyphonic pieces were expected to raise or lower certain notated pitches in practice by a chromatic semitone, sometimes out of *causa necessitatis*, sometimes out of *causa pulchritudinis*. In the former case, flats (*b-rotundum*) were added to correct a nonharmonic relation, such as the tritone (mi contra fa); in the latter case, sharps (*b-quadratum*) were added for sonority, particular at cadences (Berger, *Musica ficta*, 80, 122). This latter prescription, called by Italian theorists the “regola delle terze e seste,” mandates that a perfect consonance at a cadence must be preceded by an imperfect consonance (third or sixth) in contrary motion and in which at least one voice moves by semitone. We will return to the question of *ficta* in polyphonic music in chapter 3.

46. Fétis, “Du demi-ton dans le plain-chant,” *RMRPC* 1 (1845): 96.

47. Fétis, 111. There is one more point to Fétis’s argument that I should briefly mention. Feeling that the traditional eight-mode system of ecclesiastical modes in the Middle Ages was overly constricted, Fétis came to believe that the aboriginal modal system of chant was a fourteen-mode system based on the seven diatonic octave species of the Greeks in both authentic and plagal forms that was advocated by some later theorists (*RGM* 12, no. 5 [February 9, 1845]: 42); also see *HGM*, 4:169). With these additional six modes, Fétis found he could more easily accommodate these recalcitrant chants that would otherwise necessitate chromatic alterations within an eight-mode system.

48. *RMRPC* 1 (1845): 305–20, and *RGM* 12, no. 5 (February 9, 1845): 53. Further pushbacks against Fétis’s article were made by other irate readers; see, for example, *RMRPC* 1 (1845): 374–79.

49. *RMRPC* 1 (1845): 306.

50. *RMRPC* 1 (1845): 401–14. Fétis continued his screed against Janssen in his *Biographie universelle*, where half the entry on Janssen is devoted to railing against his ignorance and stubbornness. It was a strategy he used with depressing frequency. Unable also to resist a dig at his fellow Belgian scholars who were working down the road at Malines, Fétis caustically added that the research of Father Janssen is “based on completely erroneous principles so typical, alas, of Malines scholars in general” (*BU*<sup>2</sup>, 4:427, s.v. “Janssen”).

51. A story nicely recounted in Littlejohn, “Fétis’s Theory of Harmony in Nineteenth-Century Europe,” 218–24. Also see Bisaro, “La plume ou le goupillon?”

52. *RMRPC* 2 (1846): 104.

53. *RMRPC* 3 (1847): 380.

54. *RMRPC* 3 (1847): 51.

55. Ever sensitive to his readership, Danjou had actually written to Fétis asking him to tone down any criticism of Janssen in his article lest it offend the large number of clerics who had subscribed to his journal (*Correspondance*, #45-1, letter from Danjou to Fétis dated January 8, 1845). See also Bisaro, “La plume ou le goupillon?,” on Danjou’s complex relation to Fétis.

56. *RMRPC* 1 (1845): 252.

57. Lambillotte, *Antiphonaire de Saint Grégoire*.

58. Lambillotte, *Quelques mots sur la restauration du chant liturgique*.

59. See his translation of and commentary on chapter 10 of the *Micrologus*, in which he cites “Guido’s” discussion of *subductio* as a sanction for using sharps with discretion when singing chant: Lambillotte, *Esthétique, théorie et pratique du chant grégorien*, 192–96.

60. Lambillotte, *Quelques mots sur la restauration du chant liturgique*, 24.

61. There is an online database of the full corpus of d’Ortigue’s critical writings (on both sacred and secular music) accessible through the website “Francophone Music Criticism: 1789–1914,” <http://music.sas.ac.uk/fmc>.

62. In the music section of the Bibliothèque nationale, there is a broadside published by d’Ortigue soliciting support for his candidacy to the national assembly that is dated March 19, 1848; it is filled with the stirring Republican rhetoric typical of the time. BN 4<sup>o</sup> Rec 52 (17).

63. D’Ortigue, *Dictionnaire liturgique*.

64. On Laménais’s philosophy and its influences on Liszt and d’Ortigue, see Keym, “Franz Liszt und die Ästhetik der französischen Gregorianik-Renaissance,” 101. While it is not as clear that Fétis found any inspiration himself in Laménais’s philosophy, it is noteworthy that Laménais does cite Fétis’s notion of *tonalité* in several places in his *Esquisse d’une philosophie* (1840), without, however, mentioning Fétis’s name, an omission that obviously irked our vain musicologist (see his petulant comment in the *Traité*, 183n1). For more on Laménais’s appropriation of Fétis’s notion of *tonalité*, see Blum, “Rousseau’s Concept,” 360.

65. D’Ortigue, *Dictionnaire liturgique*, xix.

66. D’Ortigue, s.v. “tonalité,” col. 1482.

67. *RGM* 2, no. 51 (December 20, 1833): 415. Interestingly, at an earlier point d’Ortigue entertained the possibility of a “genre mixte” in which composers might combine both tonalities (*RM* 9, no. 51 [December 20 1833]: 415). But by the time he was working on his dictionary, his views had obviously hardened.

68. Without trying to push this grammatical analogy too far, d’Ortigue attempted to come up with an example of what such static prose might be like. He admitted that there was no language that relied solely on chains of substantives without verbal connection. But in certain doxological prayers, especially those in praise of God’s eternal and unfathomable qualities, one might get a sense of the ephemeral tonality of plainchant translated to prose. Such prose might consist of a series monosyllables and interjections “attempting to encompass all the sentiments of adoration, contemplation, and ecstasy . . . all notions of immensity, permanence, infinity, and attributes of eternal being,” and in whose elements we find “no mode of determined succession, since each one, no matter their degree of relation to one another, comes to be confounded and absorbed in the unity of God.” D’Ortigue suggested one such passage could be found in the seventh book of the Apocalypse: “Dicentens: Amen, benedictio et claritas, et sapientia, et gratiarum actio, honor, et virtus, et fortitudo Deo nostro in saecula saeculorum. Amen” (D’Ortigue, *Dictionnaire liturgique*, s.v. “Philosophie de musique,” col. 1175).

69. D’Ortigue, s.v. “Dièse,” col. 497.

70. D'Ortigue, s.v. "Accompagnement du plain-chant," col. 35.
71. D'Ortigue, s.v. "Harmonie," col. 675. D'Ortigue and Fétis were long acquainted with one another. And while d'Ortigue was generally an admirer of his learned senior, he was not intimidated enough to ever withhold criticism that he felt warranted. As early as 1831 the two were quarreling about the new Italian school of Rossini and the use of Lamennais's distinction between "ordre de foi" and "ordre de conception" (*RM* 5, no. 25 [July 23, 1831]: 193–95).
72. D'Ortigue, *Dictionnaire liturgique*, s.v. "Organiste," col. 1068.
73. Actually, his interest in early music can be traced back even further than that. Already in 1833, our young music critic had written an article for Fétis's journal that shows he was thinking about the problem of musical tonality: "Du progrès de l'opinion en musique," *RM* 9, no. 51 (December 20 1833): 413–16.
74. L'Écuyer, *Joseph d'Ortigue*, 118–25.
75. Wangermée, "Avant Solesmes," 412.
76. We are fortunate that the complete proceedings of the Congrès were preserved and published along with many accompanying documents: *Congrès pour la restauration du plain-chant et de la musique d'église*.
77. Gontier, *Méthode raisonnée de plain-chant*.
78. Combe, *Restoration of Gregorian Chant*, 33–34.
79. Gontier, *Méthode raisonnée de plain-chant*, 70.
80. Combe, *Restoration of Gregorian Chant*, 31.
81. D'Ortigue, *Dictionnaire liturgique*, xviii.
82. Niedermeyer and d'Ortigue, *Traité théorique et pratique de l'accompagnement du plain-chant*.
83. Niedermeyer and d'Ortigue, 8.
84. *RMRPC* 2 (July 1846): 254–55.
85. Niedermeyer and d'Ortigue, *Traité théorique et pratique de l'accompagnement du plain-chant*, 46.
86. Niedermeyer and d'Ortigue, 66–67.
87. *Congrès pour la restauration du plain-chant et de la musique d'église*, 102.
88. Taken from an essay on church music Saint-Saëns originally published in English in *Musical Quarterly* 2, no. 1 (1916): 21.
89. Vincent, "Note sur la modalité du chant ecclésiastique et sur son accompagnement," *Revue archéologique* 14, no. 2 (1858): 662–84; extracted in *Sur la tonalité ecclésiastique et la musique du XV<sup>e</sup> siècle*, 1–23.
90. Battmann, *Cours d'harmonie théorique et pratique appliqué spécialement*, 1.
91. La Fage, *Cours complet de plain-chant*, 154.
92. Gevaert, *Méthode pour l'enseignement du plain-chant*, 17.
93. Hector Berlioz, *A travers chants*, 262.
94. *Journal des débats* (January 20, 1854): 2.
95. *L'opinion publique* (December 18, 1849): 2.
96. Morelot, *Eléments d'harmonie appliquée à l'accompagnement du plain-chant*, 55.
97. Henry, *L'art d'accompagner le plain-chant*, n.p.
98. Nisard, *Les vrais principes de l'accompagnement*, 5.

## CHAPTER THREE

1. *Traité*, 165–67. The dating of “Cruda Amarilla” seemed to have been a continually vexing question for Fétis. In an article from 1832, he assigned a date for the *Quinto libro* as somewhere “around 1590” (*RM* 6, no. 18 [June 2, 1832]: 141). But in the first edition of his *Biographie universelle* from 1840, he listed the first edition as published in 1604, although he admitted he had not actually seen this printing (*BU*<sup>1</sup>, 6:452). Still, he was confident enough to assign the date of 1604 for the first edition in the appendix to his *Traité* of 1844 (273). Finally, in the second edition of his *Biographie universelle*, he listed 1599 as the date of publication (*BU*<sup>2</sup>, 6:185). Here he may have deduced the date on the basis of Artusi’s initial criticism of “Cruda Amarilla,” which came out in 1600. But as Lorenzo Bianconi has noted, Artusi was relying on a manuscript copy of the madrigal that was circulating among a closed circle of connoisseurs (Bianconi, *Music in the Seventeenth Century*, 24–25). Obviously, Fétis never did track down for himself a copy of the earliest published version, where he would have seen quite clearly that it was dated 1605.

2. *Résumé*, ccxxi. And to offer some defense for Fétis, we should note that he was hardly the only one to credit Monteverdi with ushering in a new age of music. History texts to this day are filled with chapter headings that announce a new era at the beginning of the seventeenth century with Monteverdi as the leader. This is perhaps most dramatically exemplified in Leo Schrade’s small monograph of 1950 titled *Monteverdi: Creator of Modern Music*.

3. Yet for all the confidence Fétis expressed in his selection, we should note that he had at other times crowned differing works of Monteverdi’s as the first example of the new tonality. In his *Esquisse de l’histoire de l’harmonie*, which was published in 1840, he had identified a madrigal of Monteverdi “from 1592” as inaugurating the era of modern tonality: “Stracciami pur il core” in the third book of madrigals. (This date is correct.) There, at the end of a passage consisting of a chain of double suspensions, a dominant seventh chord is heard that, “although it is prepared as a suspension, it is nevertheless an important innovation that must be considered as the origin of modern tonality” (Arlin translation of *Esquisse*, 31). As we have seen, Fétis evidently decided in 1844 that “Cruda Amarilli” contained a more convincing example of modern tonality, perhaps, I would suspect, because of the notoriety it had earned through Artusi’s criticism.

4. *RGM* 35, no. 48 [November 29, 1868]: 38.

5. *Traité*, 156; *Treatise*, 154–55 (translation modified). This might be a good point at which to mention that Fétis himself was not always so unwavering in his conviction that Monteverdi had no predecessors as the pioneer of modern tonality. In some of his earlier writings, he singled out two German composers from the sixteenth century—Adam Gumpelzhaimer and Leo Hassler—whose music conveyed startling intuitions of modern tonality (e.g. *Résumé*, ccxxii).

6. Gevaert, *Histoire et théorie de la musique de l’antiquité*.

7. Gevaert, “Les origines de la tonalité moderne,” *Le ménestrel* [November 8, 1868]: 393–95; [November 15, 1868]: 401–3; [November 22, 1868]: 414–15.

8. Gevaert, “Les origines de la tonalité moderne,” 395.

9. Kiesewetter, *Geschichte der europäisch-abendländischen oder unsrer heutigen Musik*, musical appendix no. 5, vii.

10. Gevaert, “Les origins de la tonalité moderne,” 402.

11. *RGM* 35 (November 29, 1868): 38.

12. *RGM* 35 (December 20, 1868): 404–5.

13. *RGM* 35 (December 20, 1868): 405.

14. In the catalog of manuscripts of early music contained in Fétis’s library now held in Brussels, Anne François and Els Van Hoof have itemized over 2,200 differing compositions. While it is not possible to know precisely when Fétis obtained or copied all of these manuscripts, they do attest to his lifelong obsession with the acquisition of such material. François and Van Hoof, *Bibliothèque Royale Albert 1<sup>er</sup> Bruxelles*.

15. It seems that during the 1820s—which is to say during his tenure at the Conservatoire as a teacher of composition and counterpoint—Fétis was a regular visitor to libraries and archives in Paris, taking voluminous notes on manuscripts and books that he would consult on early music. Already in 1835 he claimed that he had consulted (“without exaggeration”!) at least fourteen thousand books, music scores, and manuscripts in the various libraries of Paris in preparation for the publication of his *Biographie universelle (Résumé, xxvii)*. By 1853, he calculated, he had examined another twenty thousand books and scores in the intervening eighteen years (*RGM* 20, no. 44 [October 30, 1853]: 379). How carefully Fétis read all the material he claims to have is another question. But there is no doubt he was a voracious reader. On Fétis’s indefatigable habits as a reader and collector of books and manuscripts, see the revealing picture painted in Campos, *François-Joseph Fétis*, 47–66.

16. *RM* 1 (February, 1827): 8–10. A few issues later we find a transcribed canzone of Landini, “Non avrà pietà” (March 1827): 111–13.

17. *Mémoire sur cette question*. For deeper background on this competition, see Wangermée, *François-Joseph Fétis*, 124–39.

18. *Mémoire sur cette question*, 9.

19. Kiesewetter, “Die Verdienste der Niederlaender um die Tonkunst.” Kiesewetter’s essay was published in the same volume as Fétis’s.

20. One composer who was conspicuously absent from Kiesewetter’s text was Dufay, who did not appear among the “merkwürdigen Männer der grossen niederländischen Kunstperiode der Musik.” To be fair to Kiesewetter, Fétis did not have that much to say about Dufay either, only reporting the little bit Tinctoris wrote and commenting on a manuscript shown to him by Pixrecourt in which a few motets and chanson of Dufay reveal a “purity of harmony and regularity of imitation that I believe to be the most ancient known” (14). But before Kiesewetter’s essay was finished at the printer, he came across Baini’s study of Palestrina (*Memorie storico-critiche della vita e delle opere di Giovanni Pierluigi da Palestrina*) which had just been issued in 1828. There Kiesewetter learned for the first time of Dufay’s remarkable liturgical polyphony written for the papal chapel and which Baini was able to study firsthand. Literally stopping the presses, Kiesewetter added a “Nachtrag Eingesendet während des Druckes” in which he summarized Baini’s description of Dufay’s extraordinary musical legacy as well as additional information that Baini had provided about other early composers in service to the pope (105–15). In his history of music published five years later, Kiesewetter would give Dufay pride of place and include transcribed excerpts from three of his masses.

21. See Krummacher, “Wissenschaftsgeschichte und Werkrezeption.”

22. *Mémoire sur cette question*, 1.

23. One sees here Fétis attempting to substantiate a Belgium identity that finds a “juste milieu” between French and Dutch poles. While he certainly wanted to protect Burgundian musical patrimony from any Dutch hegemony, he also wanted to do the same against any French attempts at usurpation. In speaking about the *trouvères* of the thirteenth century, for example, he reminds his readers that many of them were “born in Belgium” and “ceded nothing to those of France and Provence” (*Mémoire sur cette question*, 10). Then, as today, Belgian identity has always been a precarious balancing act. In much the same way, the arguments supporting the existence of a “Netherlands” or “Burgundian” school of musical composition in the Renaissance have always been rife with political posturing and myth making, no less in the twentieth century as in the early nineteenth century. For a comprehensive discussion of this question, see Paula Higgins, “Antoine Busnois and Musical Culture in Late Fifteenth-Century France and Burgundy,” 213 ff. Fétis continued to work over his lifetime for recognition of a Belgian musical heritage, campaigning for a national edition of the music of eighteen “Belgian composers” from the fifteenth and sixteenth centuries, including Dufay, Binchois, Ockeghem, Obrecht, Du Roy, Agricola, Josquin, de la Rue, Ghiselin, Willaert, Gombert, Clément, Lassus, Busnois, Domart, Faugues, and Tinctoris (“Sur la publication des oeuvres musicales des compositeurs belges du xve et du xvie siècle,” *Bulletin d’Académie Royale de Belgique*, ser. 2, 7, no. 7 (1859): 6).

24. Even long after Kiesewetter passed away, Fétis continued to criticize his rival, calling him an “obstinate and mediocre harmonist” as late as 1868 [RGM 35 [November 29, 1868]: 38].

25. Kiesewetter, *Geschichte der europäisch-abendländischen oder unsrer heutigen Musik*.

26. For more on Kiesewetter’s historiography, see Kirkman, “‘Under Such Heavy Chains.’”

27. Earp, “Machaut’s Music in the Early Nineteenth Century.”

28. Kiesewetter, *Geschichte der europäisch-abendländischen oder unsrer heutigen Musik*, 72.

29. Kiesewetter, *Allgemeine musikalische Zeitung* 15 (April 11, 1838): 241. We might note, though, that the term *tonalität* had already been used in German since 1833 (in a translation, naturally, from French) as a rough synonym for the more common term *Tonart* (see Jelensperger, *Die Harmonie in Anfänge des 19. Jahrhunderts, und die Art sie zu Lernen*, 40). And in a review of Fétis’s journal, a writer for the *Neue Leipziger Zeitschrift für Musik* in 1834 flagged the term *tonalité* as one for which there was no clear German equivalent. The sense of the term would become clear, we are assured in a footnote, in the context of the translation provided (*Neue Leipziger Zeitschrift für Musik* 1, no. 58 [October 20, 1834]: 232). Still, it would not be until the second half of the nineteenth century that the term *tonalität* enjoyed more widespread usage in Germany—especially in the writings of Helmholtz and Riemann.

30. *Allgemeine musikalische Zeitung* 15 (April 11, 1838): Beilage, 1–12.

31. Kiesewetter, *Schicksale und Beschaffenheit des weltlichen Gesanges*, 4–5.

32. For the biography of Coussemaker and a review of his many activities, see Dehaisnes, *Notice sur la vie et les travaux de M. E. de Coussemaker*.

33. Coussemaker’s guide here was a treatise “de Arte musices” located in Ghent, which

he believed offered the oldest evidence of *musica ficta* (*Histoire de l'harmonie au moyen âge*, 40). He attributed the text to a certain Denis Lawts (39n). Later he retracted this attribution and simply labeled the text as of Carthusian origins (and published as "Anonymous I" in the second volume of Coussemaker's *Scriptorum de musica*, 434–60). The discussion on *ficta* in this treatise is found in chapter 16: "Quid sit dicere ficta musica, vel quid sit dicere cantare per coniunctas."

34. Kiesewetter, "Die Verdienste der Niederlaender um die Tonkunst," *Musicalische Beilagen*, 64.

35. By way of comparison, a more recent edition of these opening measures reduces the suggested *ficta* alterations to a third of the number found here. The few alterations suggested by the editor in the modern edition concern mainly the addition of flats in the tenor and bassus. The countertenor that Kiesewetter has loaded with alterations is in the modern edition completely made up of diatonic (*recta*) notes. See Regis, *Opera omnia*, 62.

36. In fact, Kiesewetter later remarked that the addition of *ficta* notes in music at the time of Dufay would lead the way to modulation and our modern key system (*Geschichte der europäisch-abendländischen oder unsrer heutigen Musik*, 48).

37. Coussemaker, *Histoire de l'harmonie au moyen âge*, 95.

38. Coussemaker, 97.

39. *Traité*, 166–69.

40. Coussemaker found this song in a manuscript held in Cambrai and dates it somewhere in the thirteenth or fourteenth centuries: *Notice sur les collections musicales de la Bibliothèque de Cambrai*, 133. Tiersot dates it more confidently as stemming from the fourteenth century (*Histoire de la chanson populaire en France*, 44).

41. It is interesting to note, though, that F5 in the upper tessitura of the melody is never raised by Coussemaker. This may have something to do with the peculiar nature of folk modality that we will look at further in chapter 4, where we find similar examples of the flat seventh in the upper tessituras of many folk melodies in a major key complemented by raised sevenths in the lower tessituras.

42. Wolinski, "Compilation of the Montpellier Codex."

43. Leech-Wilkinson, *Modern Invention of Medieval Music*, 48.

44. *Scriptorum de musica*, 1:303–19. For a modern edition, see Seay, *Anonymous II: Tractatus de discantu*.

45. On the *cantus coronatis*, see Van der Werf, *Chansons of the Troubadours and Trouvères*, 153–55. On Anonymous 2 and its discussion of *ficta*, see Brothers, *Chromatic Beauty in the Late Medieval Chanson*, 1–6.

46. Coussemaker, *L'art harmonique*, 101.

47. Coussemaker, 69.

48. Coussemaker, *Oeuvres complètes du trouvère Adam de la Halle*. On Coussemaker's role in elevating the music (and figure) of Adam de la Halle, see Haines, *Eight Centuries of Troubadours and Trouvères*, 168–78. For a contemporary study that also fingers the trouvère repertoire as leading the way toward the establishment of major tonalities, see Mc Alpine, *Tonal Consciousness and the Medieval West*, esp. 331–60.

49. Note that although no signature is given in the manuscript source, Coussemaker adds a B♭ in his edition *causa pulchritudinis*, and thereby places the music squarely in F major.



50. Coussemaker, *L'art harmonique*, lviii. Coussemaker had actually speculated about the secular origins of modern tonality as far back as 1841 when he published his first study of early music. It was on the ninth-century music theorist Hucbald, the “first link” in a long chain of French-Belgian musicians who would shape the course of early music history (*Hucbald moine de St. Armand et ses traités de musique*). Believing that the “history of harmony” began with Hucbald (viii), Coussemaker offered an annotated edition of Hucbald’s famous treatise “de musica,” a corrupt version of which had appeared in Gerbert. While Coussemaker’s own edition did not offer too many changes and his annotations were largely drawn from Forkel and Kieseewetter, Coussemaker did make an interesting observation. Among other things, he noted that alongside the sacred chant that was the object of Hucbald’s treatises, there was a “musique profane et populaire” that seemed to have gone largely unnoticed in the history of music (24–29). This music possessed a “caractère particulier” that was able to express more effectively the “sentiment des passions” of the people, although he did not explore in this particular work just what that character consisted of. It is likely in hindsight that one of the things Coussemaker was thinking of must have been its tonality.

51. Coussemaker, *L'art harmonique*, 98.

52. According to Haines, Fétis produced a performing edition of the *Jeu de Robin et Marion* with a piano accompaniment shortly before his death (Haines, *Eight Centuries of Troubadours and Trouvères*, 174, 235). But Haines is almost certainly confusing this with Coussemaker’s edition of 1872.

53. Tiersot, *Sur Le jeu de Robin et Marion*, 20.

54. Gevaert, *Histoire et théorie de la musique de l'antiquité*, 392.

55. Grocheio, *Ars musicae* 6.2.

56. Grocheio, 25.2.

57. Zarlino seemed to anticipate something along these lines when he observed in his *Le istitutioni harmoniche* of 1558 that the eleventh mode on C (christened just seven years earlier by Glarean as the “Ionian” mode) was particularly suited to instrumental “dances and balli” (Zarlino, *On the Modes*, 85).

58. Tiersot, “Des transformations de la tonalité,” 177–78.

59. Aubry, *Trouvères et troubadours*, 183, 185. In this same study, Aubry expressed strong reservations about the term *modality* to describe the ancient tonality, as it could easily be confused with the more established use of the term to distinguish rhythmic types (180).

60. Coussemaker, *L'art harmonique*, 100.

61. Coussemaker, pt. 3, “en notation originale,” xlvi; “en notation modern,” 54–56.

62. Though we should note that Burney detested this piece, believing it to be a barbarous work filled with parallel fifths (*General History of Music*, 2:406, 411).

63. Taruskin, *Oxford History of Western Music*, 1:422 ff.

64. Riemann, *Geschichte der Musiktheorie*, 337.

65. Riemann, 139 ff.

66. A key source on which I have relied is Alexander Rehding’s essay “Quest for the Origins of Music.” A condensed version of this article recapitulates some of the same arguments though with additional evidence: Rehding, “Urklänge: The Search for the Origins of German Music.”

67. Rehding, "Quest for the Origins of Music," 366.

68. The lur was a large bronze horn from the Bronze Age that was first uncovered in several Scandinavian archeological excavations. Since lurs were often found buried in pairs, a few musicologists early in the twentieth century deduced liberally from this evidence that the first Germanic tribesmen must have played the instruments together, thereby learning how to play in harmony. Beyond that, they concluded that tonality must have first been invoked in these duets, as players began to sound and improvise on the first notes of the harmonic (overtone) series (Rehding, "Search for the Origins of German Music," 236–41).

69. See some of the most numbing quotations on this theme in Potter, *Most German of the Arts*, 213–20.

70. Wegman, "'Das musikalische Hören' in the Middle Ages and Renaissance."

71. Fortunately for English readers, a very fine anthology of translations and introduction to many of the most important of these German writings is available in Moll, *Counterpoint and Compositional Process*.

72. Bessler, *Bourdon und Fauxbourdon*, 38; translated in Moll, *Counterpoint and Compositional Process*, 13.

73. Ficker "Zur Schöpfungsgeschichte des Fauxbourdon"; translated in Moll, *Counterpoint and Compositional Process*, 91–128.

74. Ficker, *Beiträge zur chromatik der 14. bis 16. Jahrhunderts*, 6. "Subsemitonium" was a Latin term often cited by musicologists during the twentieth century to designate the semitone below the *finalis* of a mode, one often created by *musica ficta*. (Dahlhaus repeatedly uses the term in this sense in his *Untersuchungen*). But *subsemitonium*, we should note, is not to be found in any theoretical sources before the eighteenth century. Beginning with Werckmeister, it was sometimes used by German theorists as a substitute term for designating the functional leading tone in a key. I suspect that Riemann may have been the one to first introduce it in musicological literature (e.g. *Geschichte der Musiktheorie*, 96, 168), where it then was picked up by Ficker and others who seemed to have assumed it was an authentic medieval term.

75. Kevin Moll offers a most useful summary of this literature in *Counterpoint and Compositional Process*, 12–24.

76. Machabey, *Genèse de la tonalité musicale classique des origines au XVe siècle*.

77. Machabey, 275. It is interesting to compare Macheby's book of 1955 with one he wrote twenty-seven years earlier: *Histoire et évolution des formules musicales du 1<sup>er</sup> aux XV<sup>e</sup> siècle de l'ère chrétienne*. While in this earlier publication he came to almost the same conclusion regarding the French contribution to the rise of "tonalité classique" (267), he allowed that many of its seeds were planted long before the music of Dufay in certain "formulas" found in monophonic song, both sacred and secular, and even in the earliest examples of notated organum.

78. Mention might be made of Alfred Einstein, who also credited sixteenth-century genres of secular dance music as incubators of modern harmonic tonality. In Einstein's case, the genres were from England. He thought certain balletti and canzonettas to be heavily responsible for "clearing up" harmonic tonality from the tangle of modal foliage. In his 1949 book on the madrigal, he cited the recompositions of Thomas Morley of songs by Gastoldi and Vecchi (1591/95) as exemplary of this kind of tonal "Englishing" (*Italian*

*Madrigal*). A later iteration of this English thesis is seen in Long, “Characteristic Tonality in the Balletti of Gastoldi, Morley, and Hassler.”

79. Dahlhaus, *Studies on the Origins of Harmonic Tonality*, 84–85.

80. Dahlhaus, 306. For more on Dahlhaus’s thesis and its context in German musicology, see Christensen, “Origins of the *Origin*.”

81. Watkins, *The Gesualdo Hex: Music, Myth, and Memory*.

82. Richard Taruskin has been a leading voice in exposing the strong dialectic between musical modernism and older music. See, among other writings, his article “Alte Musik or Early Music?” The journal issue in which that article appears, by the way, contains a number of other excellent articles offering telling case studies of Schoenberg and his circle and their engagement/obsession with early music. Especially helpful is Reinhard Kapp’s entry “Die Wiener Schule und die Alte Musik.”

83. Ficker, “Polyphonic Music of the Gothic Period,” 486. My thanks to Alex Rehding for bringing Ficker’s article to my attention.

84. Watkins, *The Gesualdo Hex: Music, Myth, and Memory*, 263–87, esp. 279–81.

85. Rehding, “Quest for the Origins of Music,” 379–80.

86. Fétis, *La musique mise à la portée de tout le monde*.

87. On the tortured production history of this work, see Wangermée, *François-Joseph Fétis: Musicologue et compositeur*, 140 ff.

88. Stafford. *Histoire de la musique*.

89. Fétis also began voicing some of his ideas in public lectures. As noted earlier (p. 292n3), twelve years before the series of lectures from 1844 on *tonalité*, Fétis gave four public lectures in 1832 on “musical philosophy and the history of music” that would give his audience a foretaste of some of the arguments he would develop in his *Résumé philosophique*. His “Cours de philosophie musicale et d’histoire de la musique” was serialized in the *Revue musicale* over eight issues between May 26 and July 21, 1832.

90. Fétis’s model may have been the historian François Guizot, who in 1828 published a *Histoire de la civilisation en Europe*. Guizot was professor of history at the Sorbonne and had begun delivering a series of lectures on world history that same year that caused as much of a stir as the lectures that were being delivered down the hallway by Victor Cousin on Hegel’s philosophy. (One sees where Fétis must have gotten the happy idea that lectures might be a good means of propagating his ideas to a wider public.) In his attempt to describe both the coherence and flow of world musical history in such broad strokes and with all the confident pronouncements and sweeping generalizations he drew, Fétis seemed to have learned much from reading (or perhaps hearing?) Guizot. But we might also note that Fétis credited the writings of the eighteenth-century art historian and critic Winckelmann, whom he praised for subtly describing the lives of artists within the deeper philosophical and historical currents by which their work can be made explicable (Wangermée, *François-Joseph Fétis: Musicologue et compositeur*, 214).

91. *RM* 9, no. 34 (August 2, 1835): 242.

92. *Résumé*, cxxix–cxxx. Unfortunately, Fétis does not tell us where he found this example or how he came to transcribe the harmonic accompaniment for it.

93. It was an argument that Coussemaker would ridicule. On the contrary, he insisted that the neumes began simply as grammatical accents notated above chant texts by the

earliest scribes and performers to aid memorization; they had nothing to do with invading Lombard tribes, let alone of oriental origins (*Histoire de l'harmonie au moyen âge*, 154–60).

94. Once again, Fétis was probably taking his cue here from Guizot, who had argued that the invading northern tribes did not just sow destruction and ruin in their pillages of the south; they also contributed something new and positive to southern societies, in this case qualities of “personal independence,” “individual liberty,” and “communal fealty” (Guizot, *Histoire de la civilisation en Europe*, 1:59–61).

95. It was a piece that would become an object of repeated argument between Fétis and Coussemaker concerning its rhythmic interpretation. (Coussemaker transcribed Adam’s music into triple meter as opposed to Fétis’s reading of duple meter.) For a detailed discussion of Coussemaker’s arguments, see Haines, *Eight Centuries of Troubadours and Trovères*, 165–78.

96. *Résumé*, clxxvi. Franco was actually writing in the mid-thirteenth century, an error for which Coussemaker fiercely castigated Fétis as well as Fétis’s claim that Franco allowed the use of binary divisions in his mensural theory (Coussemaker, *Histoire de l'harmonie au moyen âge*, 144 ff.) Fétis continued to push strongly for the earlier dating of Franco, devoting virtually the whole of his entry on Franco in the second edition of the *Biographie universelle* to a refutation of Coussemaker’s claim (*BU*<sup>2</sup>, 3:314–20). The dating was important, as we will see, for supporting his arguments regarding the development of church music in the twelfth century.

97. Jones, *Musical and Poetical Relicks of the Welsh Bards*.

98. *Résumé*, cxxxvii. Fétis offered a more detailed study of the crwth in a later history of bowed instruments, *Anthony Stradivari, the celebrated violin maker*, 17–28.

99. Walker, *Historical Memoirs of the Irish Bards*.

100. Walker, n.p., no. 9 in the musical appendix. Walker included it as an example of an ancient song “beyond the realm of memory” that was transcribed by “Mr. Gore Ousley of Limerick.”

101. I cannot resist quoting Fétis from his later *Histoire générale de la musique*, where his opinion about the thirteenth century had, if anything, hardened: “The music of the thirteenth century was the absolute negation of all the natural conditions of this art; this epoch is unique in the history of the development of the human spirit, and the opinions of several scholars concerning the music of this time [and here Fétis is obviously referring to Coussemaker] are in complete opposition to the real nature of things” (*HGM*, 5:260). Indeed, in a shrill peroration to his chapter on the discant of the twelfth and thirteenth centuries, Fétis seemed ready to condemn the whole lot to oblivion: “The imagination of such music in any epoch is a phenomenon so extraordinary, so contrary to the natural laws of human organization, that one would refuse to believe it possible except that we have the works before our eyes. Truly, the existence of these barbarisms lasting two centuries without any notable change is one of the most inexplicable marvels in the history of the arts” (281).

102. *RM* 6 (December 22, 1832): 374.

103. Burney, *General History of Music*, 631.

104. Many later writers have seized on this incident as further evidence of Fétis’s duplicity as a scholar (Walter Corten, “Fétis, transcripteur et vulgarisateur”). For a more

dispassionate analysis of the question, see Littlejohn, “Fétis’s Theory of Harmony in Nineteenth-Century Europe,” 131–50. For a reproduction of Fétis’s autographs of the *lauda*, see Campos, *François-Joseph Fétis*, 610–11.

105. Bibliothèque royale Albert 1<sup>er</sup> de Belgique, manuscrit II 3852, Fétis 1806 fols. 176, 95. My thanks to Anne-Emmanuelle Ceulemans for bringing my attention to these manuscripts. On Fétis’s long-standing desire to edit an ambitious anthology that celebrated the “Belgian” contributions to early polyphony, see Wangermée, *François-Joseph Fétis: Musicologue et compositeur*, 188–210, as well as note 23 above. While on this topic, I might also point out Fétis’s related ambition to produce an anthology of medieval theoretical writings that anticipated Coussemaker’s later project. In particular, Fétis had long labored on editing and translating the theoretical writings of Tinctoris (yet another notable “Belgian”), a project that he never was able to bring to completion. See Woodley, “Brussels, Bibliothèque Royale, MS. II 4147,” and Campos, *François-Joseph Fétis*, 125–31.

106. For the question of the various attributions in these manuscript copies of Fétis, see Van den Borren, “Inventaire des manuscrits de musique polyphonique qui se trouvent en Belgique.”

107. Which is to say it is a “second inversion” of a dominant seventh chord. Both of these passages are reproduced and discussed in Ceulemans, “Fétis and the Idea of Progress in Music.”

108. Arlin translation of *Esquisse*, 7; a similar assessment is found in *HGM*, 5:288.

109. *RGM* (August 14, 1853): 281.

110. D’Ortigue, *Dictionnaire liturgique*, col. 1467.

111. Loquin, *Essai philosophique sur les principes constitutifs de la tonalité moderne*, 1:6–7.

112. D’Ortigue, *Dictionnaire liturgique*, xxii.

113. But in chapter 7 we will hear from several composers who did indeed attempt to bring medieval modality—and much else—into their compositions as a kind of tonal elixir to help revitalize what was perceived to be a decaying modern tonality.

114. D’Ortigue, *Dictionnaire liturgique*, cols. 1496, 1500–1502.

115. This was a sentiment echoed by Gontier in a letter to Dom Gueranger written in August 2, 1859: “If we succeed in making plainchant well understood, it will be seen as the religious musical idiom of the people, a music that is not only natural and pious, but I would even say inspired. Its beauty is in its naturalness, a simplicity that excludes any art; it is prayer, fittingly uttered.” Quoted in Combe, *Restoration of Gregorian Chant*, 27.

#### CHAPTER FOUR

1. Kastner, *Les voix de Paris*.

2. Kastner, 77.

3. *Journal des débats*, March 19, 1858, 1.

4. In his recent dissertation, Jacek Blaszkiewicz discusses Kastner’s book in more detail, reading the work as a mission of preservation in the wake of a rapidly changing urban soundscape (“City Myths: Music and Urbanism in Second-Empire Paris,” esp. chapter 4: “Street Cries and the Preservation of Le Vieux Paris.”) My thanks to Dr. Blaszkiewicz

for sharing his dissertation with me while still in progress. For a differing take on Kastner's project, one that reads him as a kind of flaneur enacting both scientific and aesthetic narratives, see Laurence, "Georges Kastner's *Les voix de Paris* (1857)."

5. A story told in Alden, "Musical Archaeology and the Search for Popular Song."

6. For a comprehensive listing of nineteenth-century collections of French folk songs, see the (still-authoritative) article by Tiersot, "La chanson populaire," in Lavignac and De la Laurencie, *Encyclopédie de la musique et dictionnaire du conservatoire*, pt. 2, vol. 5, 2866–3014.

7. Fortoul's directives are reproduced in Cheyronnaud, *Instructions pour un recueil général de poésies populaires de la France* (1852–1857).

8. On the political motivations behind the "Fortoul project" (*enquête Fortoul*), see Rosenberg, *Music, Travel, and Imperial Encounter in 19th-Century France*, chap. 3, "Between Paris and the Provinces: Ideologies of Song and Folksong Collection," 109–37, and also Fulcher, "The Popular Chanson of the Second Empire."

9. D'Ortigue, *Dictionnaire liturgique*, s.v. "Tonalité," col. 1506.

10. Mahé, *Essai sur les antiquités du département du Morbihan*, 362–75.

11. Becker, *Joseph Mahé (1760–1831)*; Gourhand, *L'abbé Joseph Mahé*.

12. Mahé, *Essai sur les antiquités du département du Morbihan*, 368.

13. Villemarqué, *Barzaz Breiz*.

14. The most sustained attack came from François-Marie Luzel, who in front of a conference of Breton scholars in 1868 denounced Villemarqué's edition as a forgery. This harsh assessment was largely endorsed by a study in 1960: Gourvil, *Théodore-Claude Henri Hersart de La Villemarqué*. However, a more recent evaluation of the controversy is far more charitable to Villemarqué. Based on newfound evidence, Donatien Laurent was able to show that Villemarqué did in fact draw his transcriptions and translations from existing songs; Laurent, *Aux sources du Barzaz Breiz*. Still, it seems incontrovertible that Villemarqué did take liberties in his edition by polishing up and augmenting the lyrics with many of his own invention.

15. Villemarqué, *Barzaz Breiz*, 1:v.

16. Julien Tiersot, while conceding many of its problems, still felt that the merits of Villemarqué's edition far outweighed its faults and that the melodies that were recorded in it presented the physiognomy and soul of the country unmistakably; *La chanson populaire française et les écrivains romantiques*, 45–46. Even Gourvil, *Théodore-Claude Henri Hersart de La Villemarqué*, 509–22, deems the notated melodies to be largely reliable, since he believed Villemarqué's memory could largely be trusted in this area.

17. Herry, *Eunn dibab toniou evit kannauennou santel ha gwersiou Breiz-Isel* (Sacred songs of Brittany transcribed in measured plainchant).

18. Beaulieu, *Mémoire sur quelques airs nationaux qui sont dans la tonalité grégorienne*.

19. Maybe the antiquity of these songs was even older than that. In another essay penned two years earlier, Beaulieu wondered whether the ecclesiastical chant of the church to which Beaulieu connected the folk songs of the peasantry might itself not be traced back to the music and modes of ancient Greece. It was a proposition, as we will soon see, that had other advocates. Désiré Beaulieu, *Mémoire sur ce qui reste de la musique de l'ancienne Grèce dans les premiers chants de l'église*.

20. Le Jolis, "De la tonalité du plain-chant comparée à la tonalité des chants populaires."
21. Gagnon, *Chansons populaires du Canada*. See also Smith, "Ernest Gagnon's *Chansons Populaires du Canada*."
22. Cheyronnaud, *Instructions pour un Recueil général de poésies populaires de la France (1852–1857)*, 94–95.
23. Quoted in Tiersot, *Histoire de la Chanson Populaire en France*, 260. A good example (of any of the hundreds that we might select) is seen in the opening of the second tableau of Berlioz's *Lenfance du Christ* (1853), where a pastoral scene of peasants is underscored by a violin melody in F# minor sounding the natural seventh E $\flat$ . Lest any musician mistake the modality of this passage and be tempted to play the raised leading tone E#, Berlioz notates a reminder directly above the music: "Mi $\flat$  non #!" (E $\flat$  not E#).
24. Locke, "Constructing the Oriental 'Other,'" 266.
25. A story recounted in his mémoire, L. A. Bourgault-Ducourdray, *Souvenirs d'une mission musicale en Grèce et en Orient*.
26. Gevaert, *Histoire et théorie de la musique de l'antiquité*.
27. Gevaert was not the first writer to suggest the term *modalité* to describe the system of the eight ecclesiastical modes, however. The first reference I have found to the term is in Niedermeyer and d'Ortigue, *Traité théorique et pratique de l'accompagnement du plain-chant*, 28.
28. Bourgault-Ducourdray, *Trente mélodies populaires de Grèce et d'Orient recueillies et harmonisées par L. A. Bourgault-Ducourdray*. Oddly enough, the lyrics of each of these songs were translated and set into Italian rather than French, since he felt that the Italian language better reflected the sonorous timbre of Greek than could French (23).
29. Bourgault-Ducourdray, *Conférence sur la modalité dans la musique grecque*.
30. Bossis, "Louis-Albert Bourgault-Ducourdray et la Bretagne."
31. Bourgault-Ducourdray, *Trente mélodies populaires de Basse-Bretagne recueillies et harmonisées*. Also see Groote, "'Griechische Bretonen?'"
32. In Quellien, *Chansons et danses des Bretons*, 275–76, one may also find a version of the tune with a few melodic changes and completely in the Dorian mode, thus closer to the version of Henry (ex 4.12) than Villemarque's (ex 4.10). Weckerlin also provided a piano accompaniment of the tune in his *Échos du temps passé*, published in 1857 (1:107–9). But his setting—like most of the other "ancient" tunes he set in this collection—updated the harmony in the music in most every case to the point where any trace of a *tonalité antique* is barely recognizable.
33. For more on these popular piano accompaniments to folk music and the political agendas behind many of them, see Revuluri, "French Folk Songs and the Invention of History." Revuluri correctly notes that the differing ways a folk song is harmonized may well reflect competing visions of both history and theory on the part of the arranger. (Her own test case is two settings of a tune "Auprès de ma blonde" by Tiersot and d'Indy from the early twentieth century.)
34. Marchand, *Du principe essentiel de l'harmonie*, v.
35. César Franck: *A translation from the French of Vincent d'Indy with an Introduction by Rosa Newmarch*, 144.
36. Barker, *Greek Musical Writings*, 2:142–43, 511.

37. *Dictionnaire de l'Académie française*, s.v. "Ton," 2:855.
38. Boutard, *Dictionnaire des arts du dessin*, 656.
39. Sutter, *Philosophie des Beaux-Arts appliquée à la peinture*, 255.
40. Hamerton, *Etching and Etchers*, 80.
41. Garnier. *Le nouvel Opéra de Paris*; Chabaneau, *Grammaire limousine: phonétique, parties du discours*, 6.
42. Paris, *La versification française*, 20, 280, 283 ff.
43. E.g., Sarda, *De la tonalité et du timbre dans le percussion pulmonaire*.
44. Reicha, *Art du compositeur dramatique*, 90.
45. For these and other ways tonality has been defined and used, the reader is reminded of the helpful survey by Michael Beiche.
46. Coussemaker, *Chants populaires des flamands de France*, xix.
47. Weckerlin, *La chanson populaire*.
48. The manuscripts are still available to readers in the Bibliothèque nationale: BN, nouv. acq. fr. 3338–3343.
49. Weckerlin, *La chanson populaire*, 189.
50. Tiersot, *Histoire de la chanson populaire en France*.
51. Tiersot, 300.
52. Tiersot, 301. Fétis notes a similar bimodality in a medieval English Christmas carol (*HGM*, 4:417), but he makes no mention of any tonal dynamic to account for this oddity.
53. Tiersot, "Le chant populaire," 2872.
54. Tiersot, *Histoire de la chanson populaire en France*, 322.
55. *RM* 2 (1827): 73.
56. The collection now lies in the archives of the Brussels Conservatory of Music, ms no. 27.933. Described in Wangermée, *François-Joseph Fétis: Musicologue et compositeur*, 209.
57. "Collection choisie de chants populaires de toutes les nations, classées par origines de races; avec paroles françaises et accompagnement de piano. Précédés de notices sur leurs formes, leur caractère, les circonstances et les époques de leurs modifications, et d'une introduction historique, par F. J. Fétis." For an accessible reproduction of his arrangements, see appendix D in Littlejohn, "Fétis's Theory of Harmony in Nineteenth-Century Europe," 369–404.
58. *HGM*, 5:507 ff.
59. Tiersot, "Les types mélodiques."
60. Tiersot, "L'expansion de la chanson populaire française dans le temps et l'espace."
61. Tiersot's two comparative categories of geographical and chronological analysis of folk melodies may bring to mind De Saussure's semiotic categories of synchrony and diachrony, which the Swiss linguist began to develop a few years after the appearance of Tiersot's work. De Saussure taught for a period in Paris, though I have found no evidence of any contact between the two men.
62. Quoted in Tiersot, "Le chant populaire," 2871.
63. Tiersot, "L'expansion de la chanson populaire dans le temps et l'espace," 613.
64. And Tiersot's examples are just the tip of the iceberg for this song. It turns out that variants of "Jean Renaud" could be found across Europe, including versions in Spain, Scotland, Bohemia, and Portugal. In his exhaustive study of its transmission, the folk-



lorist George Doncieux (and friend of Tiersot) was able to identify fifty-nine versions of “Jean Renaud” that were published during the last half of the nineteenth century. Through extensive philological and linguistic analysis, he was able to determine with relative certainty that the song’s ultimate origins lay in Scandinavia. Doncieux and Tiersot, *Le romancéro populaire de la France*, 84–124.

65. Similar examples of the transmission and arrangements of another popular folk song—in this case, “La Pernelle”—are discussed in Pasler, “Race and Nation,” 160–66.

66. Villemarqué, *Barzaz-Breiz*, 1:vii.

67. Tiersot, “Les types mélodiques,” 161.

68. And not only Tiersot. Cecil Sharp (1859–1924), who was almost an exact contemporary of Tiersot, also thought that the English folk songs he studied went through a similar Darwinian process of natural selection. He divided this evolutionary process into three stages of transmission: continuity, variation, and selection. Sharp, *English Folk-Song*, 16–31.

69. Cited in Pasler, “Race and Nation,” 156.

70. D’Ortigue, *La musique à l’église*, 38.

71. Bourgault-Ducourdray, *Trente mélodies populaires de Basse-Bretagne recueillies et harmonisées*, 11.

72. Pasler, “Race and Nation.”

#### CHAPTER FIVE

1. *Description de l’Égypte*.

2. For a lively reading of this tale, see Rehding, “Music-Historical Egyptomania, 1650–1950.”

3. Villoteau’s contributions are distributed over three volumes of the *Description*: “Mémoire sur la musique de l’antique Égypte,” 8:211–355; “Description historique, technique et littéraire, des instrumens de musique des orientaux,” 13:221–560; and “De l’état actuel de l’art musical en Égypte,” 14: 1–496.

4. A helpful overview of Villoteau’s project, along with an analysis of its ethnographic tensions, is found in Rosenberg, *Music, Travel, and Imperial Encounter in 19th-Century France*, 21–71.

5. Agnew, *Enlightenment Orpheus*.

6. Bohlman, “European Discovery of Music in the Islamic World,” 149.

7. One of his primary sources was al-Fārābī’s fabled treatise titled *Kitāb al-mūsīqī al-kabīr* (The great book of music) from the early tenth century. Al-Fārābī’s treatise proved less helpful to Villoteau in understanding contemporary Arabic music because it was largely concerned with the music theory of Ancient Greece. But it did convince Villoteau that Arabic music must have been related to ancient Greek practice. A more useful source for explaining contemporary Arabic music was an anonymous seventeenth-century treatise titled *Al-shajara dhāt al-akmām* (and translated by Villoteau as *L’arbre couvert de fleurs dont les calices renferment les principes de l’art musical* [The tree covered by flowers in which calices contain the principles of musical art]). This became the primary source cited (and extensively translated) in his discussion of Arabic tonal theory.

8. *Description de l’Égypte*, 14:13–112.

9. The Arabic notations were adapted from a manuscript Villoteau consulted written by a Moldavian Prince—Demetrius Cantemir—who was active in Istanbul at the end of the seventeenth century; Villoteau, 14:40).
10. *Description de l'Égypte*, 14:62 ff.
11. *Description de l'Égypte*, 14:155. It took Villoteau some time to learn how to “unvail” the basic melody from all this ornamentation in his transcriptions. See Rosenberg, *Music, Travel, and Imperial Encounter in 19th-Century France*, 38–42, for a helpful discussion.
12. *Description de l'Égypte*, 14:114–15.
13. *Description de l'Égypte*, 14:115–16. Translated in Rosenberg, *Music, Travel, and Imperial Encounter in 19th-Century France*, 46.
14. Ghrab, “Occident and Intervals in ‘Arabic Music.’”
15. *Description de l'Égypte*, 13:365–90. This tuning results in a five-note pentatonic scale (384).
16. One later musical visitor who agreed with Villoteau was Francisco Salvador-Daniel, the author of his own musical travelogue through North Africa published in 1863, *La musique arabe, ses rapports avec la musique grecque et le chant grégorien*. Salvador-Daniel repeated the thesis of Villoteau that Arabic music would give a window onto ancient Greek practice and consequently of the earliest Western chant traditions.
17. Villoteau still subscribed to a Rousseauian notion of music as a language of expression, with each musical system expressing the particular “accents” of a people. See his *Recherches sur l'analogie de la musique*.
18. Fétis obviously held the elder scholar and his writings in great esteem, though he did question some of Villoteau’s aesthetic deductions. See *BU*<sup>2</sup>, 8:349–53 (s.v. “Villoteau”), as well as the warm letters of Villoteau to Fétis in *Correspondance*, #25-4 (December 9, 1825) and #31-4 (July 1831).
19. *RM* 1 (May 1827): 370–81, 389–402; 2 (August 1827): 1–9.
20. *Résumé*, xlvii. Jones had written: “I tried in vain to discover any difference in practice between the Indian scale, and that of our own; but, knowing my ear to be insufficiently exercised, I requested a German professor of musick to accompany with his violin a Hindu lutenist, who sung by note some popular airs on the loves of Crishna and Ra’dha; he assured me, that the scales were the same; and Mr. Shore afterwards informed me, that, when the voice of a native singer was in tune with his harpsichord, he found the Hindu series of seven notes to ascend, like ours, by a sharp third. . . . [He concludes] the regular Indian gamut answers, I believe, pretty nearly to our major mode.” Quoted in Rosenthal, *Story of Indian Music*, 180–82. Writing a century later, C. R. Day agreed with Jones’s verdict. While a division of the scale in *śrutis* may have had historical origins, Day wrote, it no longer exists in practice. Like all other scales of the world, he concluded, the Indian scale consists of seven notes, of which the fundamental and the fifth are immutable (cited in Tiersot, *Notes d’ethnographie musicale*, 63).
21. For more on Indian gapped scales and their possible relation to Western pentatonism, see the discussion surrounding example 5.6.
22. *Résumé*, cviii. We will see shortly Fétis walking back on this claim.
23. At this point, Fétis did not have reports of any surviving Egyptian musical instruments. But as European archeologists began uncovering a number of tombs, a few specimens were found. The most important would be a flute that eventually found its way to

Florence. Fétis only heard about this flute after he had published his *Résumé*, but we will see shortly that it provided him with some new tantalizing evidence about the tonality of ancient Egyptian music.

24. As we noted earlier, he repeatedly would promise his readers a fuller history of music in his forthcoming “General History of Music” that would fill in the details of his *Résumé* and substantiate his arguments with greater musical evidence (see, e.g. *Résumé*, cvi).

25. *Geschichte der europäisch-abendländischen oder unsrer heutigen Musik*.

26. Kieseewetter, *Ueber die Musik der neueren Griechen*.

27. Kieseewetter, “Ueber die Entdeckung des Hrn. Fétis an der Tonschrift der heutigen Griechen, und desselben Folgerung hieraus zum Erweis der Beschaffenheit der Musik des alten Egyptens,” *Ueber die Musik der neueren Griechen*, 17–40.

28. Kieseewetter’s arguments seem not to have worked, for Fétis continued to insist on the Egyptian origins of Byzantine notation (*HGM*, 1:310).

29. In an admonition that many music theorists today might do well to keep in mind, Kieseewetter wrote, “I believe that we will always find ourselves in error if we limit our knowledge of any people regarding the character of their art to the surviving treatises of the theorists [*Systematiker*]”; *Ueber die Musik der neueren Griechen*, 32.

30. Kieseewetter, *Die Musik der Araber*.

31. Edward Lane, *Account of the Manners and Customs of the Modern Egyptians*.

32. Bohlman, “R. G. Kieseewetter’s *Die Musik der Araber*,” 164.

33. Kieseewetter, *Die Musik der Araber*, 7–8; translated in Bohlman, “R. G. Kieseewetter’s *Die Musik der Araber*,” 172–73.

34. At times, Kieseewetter sounded as strident as Mattheson in his animadversions against music theorists and their penchant toward abstract calculation and systematization. No area is rife with such nonsense, he thought, than the question of tuning and temperament. See—as one telling example—his *Der neuen Aristoxener zerstreute Aufsätze über das Irrige der musikalischen Arithmetik* from 1846.

35. Kieseewetter, *Die Musik der Araber*, 30–37.

36. Kieseewetter, 72.

37. *RGM* (May 18, 1845): 155.

38. *BU*<sup>2</sup>, 4:29, s.v. “Kieseewetter.”

39. Fétis also cannot resist adding a dig at Kieseewetter’s personal character. In a classical example of the pot calling the kettle black, Fétis laments a “touch of vanity” he finds in Kieseewetter’s writings; our intemperate Austrian, he complains, shows the greatest “indignation at the slightest opposition to his views” (*BU*<sup>2</sup>, 4:29). One might think this a rather good description of Fétis’s own personality!

40. Kieseewetter, *Die Musik der Araber*, 81–82.

41. Fétis relied on the testimony of late-classical writers such as Macrobius and Gaudentius regarding the obsolescence of the enharmonic genre. Note, however, that both Ptolemy and Aristides Quintilianus reported that the enharmonic genre was still practiced in their own days. See West, *Ancient Greek Music*, 166.

42. Raillard, “Emploi des quarts de ton dans le chant d’église.” Also see his pamphlet from 1852: “Explication des neumes ou anciens signes de notation musicale.”

43. Vincent, “Emploi des Quarts de ton dans le chant grégorien.”

44. Vincent, "Emploi des quarts de ton dans le chant grégorien," 367n1.

45. Fraselle and Germain, "Sur la subduction dans le chant grégorien," in *Études et recherches sur la théorie et l'histoire du chant grégorien*, 139–46. It will be recalled from the discussion in chapter 2, that a passage concerning *subductio* found in Gerbert's edition of the *Micrologus* was cited by some scholars as evidence for the use of *musica ficta* by singers of chant. Quite obviously an interpolation by a later scribe, the enigmatic passage speaks of altering the notes F♯ and C♯ at cadential points by a diesis, which is to say, by "half of a semitone, just as a semitone is half of a tone" (*Quae subductio appellatur diesis, et medietas sequentis semitonii, sicut semitonium est medietas sequentis toni.*). Fraselle and Germain calculated the tuning of this interval and found that it accorded perfectly with the enharmonic comma described by Marchetto—a finding confirmed in Vincent's earlier study (*Sur la théorie de la gamme et des accords*, 22).

46. Fétis, "Rapport sur l'emploi du quart de ton dans le chant grégorien au moyen âge." A reprint of this essay along with a response is contained in Fraselle and Germain, *Études et recherches sur la théorie et l'histoire du chant grégorien*, 147–90.

47. The theory that many medieval musicians might have indeed used intervals smaller than the semitone in the singing of chant remains a lively topic to this day. For the affirmative case, see Atkinson, *Critical Nexus*, 164–65; for a dissenting view, see Froger, "Les prétendus quarts de ton dans le chant grégorien."

48. In fact, this is precisely what some scholars today have argued. According to the "Arabian influence" theory, troubadour singers in the early Middle Ages must have picked up some of the melismatic singing cultivated by the Moors (just as they surely had adopted the Arabic oud), and this practice eventually made its way across the Pyrenees into the chant practice of the time. For the possibility that this also included microtonal singing, see Burstyn, "'Arabian Influence' Thesis Revisited," 135–6.

49. Villéhélio, *Souvenir des Pyrénées*. The practice would certainly be consistent with the "Arabian influence" theory mentioned in the previous note.

50. Tiersot, *Histoire de la chanson populaire en France*, 321. Even the Javanese gamelan music that had so entranced the French public at the 1889 World's Fair, Tiersot noted, turns out to be built on the diatonic and chromatic scales of the West. If there were any deviations from these, he thought, they were merely intonation discrepancies common to the process of casting bronze gongs and keys (Tiersot, *Musique pittoresques*, 37).

51. Eighteenth-century French composers, especially, seemed to be fascinated by the enharmonic genre; witness Rameau's frequent discussion of the question and a few attempts at incorporating enharmonic passages in his music (Christensen, *Rameau and Musical Thought*, 199–207). Some composers actually tried writing pieces in which quarter tones would be performed by players, a famous example being the *Air à la grecque* (for flute and continuo) by De Lusse (contained in his *L'art de la flûte traversière*, ca. 1760, as an appendix).

52. Both Vincent and the Belgian theorist Charles Delezenne used up a good deal of printed paper calculating many of the oriental scales using logarithms: see Delezenne, *Table de logarithms acoustiques depuis 1 jusqu'à 1200*. Vincent's design of an enharmonic keyboard capable of playing quarter tones is described in Barbieri, *Enharmonic Instruments and Music 1470–1900*.

53. Reicha, *Traité de haute composition musicale*, 2:329–30.

54. Vincent, “De la musique des anciens grecs.”

55. Fétis, *Mémoire sur l’harmonie simultanée des sons chez les grecs et les romains*.

56. Fétis continued his diatribe against Vincent in the second edition of his *Biographie universelle*. In a work that has many strong words against his critics, no entry was probably as crushing as that which Fétis wrote on Vincent, who seemed to be a constant gadfly for Fétis no matter what topic he might be working on. His final words in that entry convey the tone of his essay: “When M. Vincent and I discuss music, whether of its nature, its theory, or its history, I speak of what I know; he speaks, however, of what he does not know, and even what he does not understand, because he has no musical sense whatsoever” (*BU*<sup>2</sup>, 8:356).

57. Vincent, *Réponse à M. Fétis et réfutation de son mémoire*, and Gevaert, *Histoire et théorie de la musique de l’antiquité*, 356–76.

58. See Agnew, *Enlightenment Orpheus*, 97–99. Tiersot also noted much harmony in the “primitive” music he heard at the Paris Exposition in 1889. Perhaps it was not sophisticated and rationalized in any Western sense. But from Africa to Oceania, there were countless examples of natives singing or playing together (*Musiques pittoresques*, 106). He noted, as one example, a kind of discant in two—and sometimes even three—voices improvised by Congolese singers that dispelled Fétis’s insistence on the uniqueness of harmony to the medieval West (107). See also Fauser, *Musical Encounters*, 251–52.

59. Fétis, *Mémoire sur l’harmonie simultanée des sons chez les grecs et les romains*, 112.

60. Fétis, 117.

61. Fétis, 112.

62. *Résumé*, cvi. But as early as 1807, Fétis had indicated his desire to write a comprehensive history of world music (Wangermée, *François-Joseph Fétis: Musicologue et compositeur*, 115).

63. Fétis, *Mémoire sur l’harmonie simultanée des sons chez les grecs et les romains*, 3.

64. See Édouard’s touching postscript to the last volume in which he describes this story in detail (*HGM*, 5:371–75).

65. The first three volumes dealt exclusively with music of antiquity and the Orient (together weighing in at some 1,500 pages). It is only with the fourth volume that Fétis begins to discuss music of the Christian church in the West up to the eleventh century. Volume five would then continue the story of Western music from the twelfth through the beginning of the fifteenth century. And as mentioned, the three volumes that were to follow but never completed would have brought the story of Western music up to Fétis’s own day.

66. Jones had observed that a large number of words in ancient Sanskrit seemed to have cognates in a range of Near Eastern and European languages, including Persian, Greek, Latin (and hence, all Romance languages), and even the Germanic, Slavic, and Celtic tongues. While Jones was not the first to note this, his prominence as a famed orientalist helped to spur the study of Sanskrit and other South Asian languages that would soon revolutionize the field of linguistics.

67. Pedersen, *Discovery of Language*, 248–77.

68. In his library, Fétis had a large number of books by linguists who studied various

Indo-European languages (nos. 454–524 in the *Catalogue de la bibliothèque de F. J. Fétis*, 51–60).

69. For a helpful overview of this nineteenth-century scholarship, see Renfrew, *Archaeology and Language*, esp. 9–19; and Pereltsvaig and Lewis, *Indo-European Controversy*, 19–32.

70. Quoted in Myhill, *Language, Religion and National Identity*, 6.

71. The idea that music might mimic the migrations of languages was actually not entirely original to Fétis. Edward Lane (an English author of an 1836 study of modern Arabic music on which both Fétis and Kiesewetter relied) had actually first speculated that Arabic music might be traced back to Central or South Asian roots. Lane, *Account of the Manners and Customs the Modern Egyptians*, 324.

72. Olender, *Languages of Paradise*, 53–54.

73. *Antoine Stradivari, luthier célèbre*, p. 11.

74. On the efforts of Fétis and d'Ortigue to bring musical evidence to the attention of scholars in anthropology, ethnology, and linguistics, see Cheyronnaud, "La musique en ses idioms."

75. For Rameau's aspirations as a scientist-philosophe, see Christensen, *Rameau and Musical Thought*. Rameau's presentation to the Académie royale des sciences is described on pages 212–15.

76. For a transcription and history of this document, see Haraszti, "Fétis, fondateur de la musicologie comparée."

77. Fétis, "Sur un nouveau mode de classification des races humaines d'après leurs systèmes musicaux," *Bulletin de la Société d'Anthropologie de Paris*, February 21, 1867, 141.

78. Fétis, 144. It is not clear where Gaussin found this reference about Tahitians. It is not to be found in Fétis's original paper submitted to the society, or at least in the one published in its bulletin.

79. Fétis, 145.

80. Fétis, 145. Fétis's paper actually seems to have been something of a triumph for him. One member of the society, a certain Dr. Camus, wrote to Fétis shortly after the reading of his paper and excitedly reported on the favorable reception and "profound astonishment" it elicited among the committee members despite the carping of a few outliers. *Correspondance*, #67-5 (January/February 1867).

81. Burney, *General History of Music*, 1:45.

82. Quoted by Alexander Ellis in Helmholtz, *On the Sensations of Tone*, 259–60.

83. Helmholtz, 260. Ellis's hunch seems confirmed by the collection of fifteen Scottish tunes harmonized (or "acclimatized") by Bourgault-Ducourdray in a publication he brought out in 1909 that complemented the similar collections he made of Greek and Breton folk songs. (*Quatorze mélodies celtiques*). Four of the fourteen songs seem unambiguously pentatonic, though another two or three that have some traces of the scale.

84. Burney, *General History of Music*, 1:46. For further background on Burney's discussion, see Gelbart, *Invention of "Folk Music"*, 120–26.

85. Fink, *Erste Wanderung der ältesten Tonkunst*, 120 ff.

86. Burney, *General History of Music*, 1:48–49.

87. Gelbart, *Invention of "Folk Music,"* 135. In 1833 Andreas Kretzschmer also suggested that the pentatonic scale may have been a universal primitive scale (*Ideen zu einer Theorie der Musik*, 26), as would Gevaert (*Histoire et théorie de la musique de l'antiquité*, 4).

88. Gelbart, *The Invention of "Folk Music,"* 147–52.

89. French readers could have learned a good deal about the "gamme gaëlique" through the writings, in 1821, of Louis Necker de Saussure, a Swiss scientist who had extensively traveled through the highlands: *Voyage en Écosse et aux Îles Hébrides*. De Saussure had also read about Scottish music in Burney, MacDonald, and other British writers, and he did not fail to include in his report the striking correspondence with Chinese musical scales. For more on De Saussure, see Gelbart, *The Invention of "Folk Music,"* 129–30.

90. Although the story was not so clear cut. Many scholars saw a different genealogy for the Celtic race quite apart from the Gauls. On this question, see Pasler, "Theorizing Race," 482–83.

91. Duhamel, *Musiques Bretonnes*. Later in the twentieth century, however, this proved no obstacle to many Bretons who apparently imported some of this music from the highlands as a piece of a general Celtic culture for their own nationalist agenda. In my own completely unscientific observations carried out during the summer of 2002 during a three-week vacation in Brittany, I was able to hear in various pubs and music festivals a large number of tunes that employed pentatonic scales played by "authentic" Breton folk musicians.

92. Duhamel, "Les 15 modes de la musique bretonne," 735.

93. Tiersot, *Musiques pittoresques*, 36–38. The thesis that pentatonic scales (of many varieties) constitute an aboriginal music language around the world continues to intrigue ethnomusicologists. For a founding version of this thesis, see Brailoiu, "Sur une mélodie russe."

94. Gustave Reese speculated that some of the earliest Roman chant that has come down to us was based on pentatonic structures (*Music in the Middle Ages* [1940; reprint, New York: W. W. Norton, 1968], 159–60). In a later, far more systematic study, Finn E. Hansen offered striking confirmation of this thesis in his analysis of melodies in the Montpellier antiphony: *The Grammar of Gregorian Tonality: An Investigation Based on the Repertory in Codex H 159, Montpellier*.

95. Fétis, "Sur les anciens airs écossais," *RM* 6 (September 24, 1831): 261–64.

96. Fétis, 261.

97. Fink's *Erste Wandering der ältesten Tonkunst*, he chided, was but an amalgam of ideas gathered from secondary sources whose connections are lost on the author. "His views lack any perspective, and nothing he writes rises above the mediocre in this little volume"; *BU*<sup>1</sup>, 4:123, s.v. "Fink, Goderfroi-Guillaume."

98. Pictet had suggested (erroneously, as it turns out) that the Irish name for their homeland (*Erie*) was actually based on the name of the Aryans: *Arya*. Fétis himself offered a small exercise in linguistic philology by tracing the word for the Welsh *crwth* to the Celtic word for music (*cruisigh*), which in turn can be traced to the Sanskrit word *krus* (meaning to "cry out" or to "produce loud sounds"). Fétis, *Anthony Stradivari, the celebrated violin-maker*, 11–12.

99. *HGM*, 2:213–15. For more recent scholarship on the use of "dropped" tones in

Indian scales creating hexatonic and pentatonic variants, see Rowell, *Music and Musical Thought in Early India*, 160–62.

100. *HGM*, 1:58. We might note that Berlioz had a similar encounter in England with some Chinese musicians as Fétis did, but with almost opposite conclusions. While listening to a group of Chinese musicians (including a “small-footed lady”), Berlioz was disappointed to find that none of the musicians used a tonality and division of the scale he had come to expect. (One presumes this would have been pentatonic.) Instead, the results were “entirely in accordance with those of our own scale.” This is not to say he enjoyed what he heard. To the contrary, he found the music “abominable from every standpoint,” with the Chinaman’s voice full of “nasal, guttural, moaning, hideous tones, which I might, without too greatly exaggerating, compare to the sounds that escape from a dog’s throat when, after a long sleep, it stretches its limbs and yawns.” Still, Berlioz thought his experiment “decisive in regard to the division of the scale and the sense of tonality among the Chinese” (*Evenings with the Orchestra*, 238–39).

101. Lest we think that Fétis got away with these comments without any pushback from colleagues, we should note here that he was severely castigated by Adrian de La Fage for his shoddy scholarship on Chinese music. (Fétis returned the favor as one can read in the *BU*<sup>1</sup> entry for La Fage.) La Fage, though better known for his study of medieval chant, was himself an author of a major study of oriental musics (*Histoire générale de la musique et de la danse*), and he repeatedly clashed with Fétis over their respective interpretations. For an extensive discussion of Fétis’s work on Chinese music and its controversial reception, see Campos, *François-Joseph Fétis, 197–227*; on the polemics with La Fage, 204–7.

102. For a history of racial theory in France during the first half of the century, see Staum, *Labeling People*.

103. The surprising role music played in the question of French colonialism and racial theory has been brilliantly explored by Jann Pasler in her article “Theorizing Race in Nineteenth-Century France: Music as Emblem of Identity.” Pasler shows that music became not only a useful tool to mark and distinguish the differing levels of civilization of a given colonized people, it could be an educational aid to France’s “mission de civilisation” by which the most backward of colonial subjects could be “elevated.” As such, music was of use to both Republicans and colonialists.

104. Gobineau, *Essai sur l’inégalité des races humaines*.

105. Fétis’s critique came in an appendix to the first volume of his *Histoire*, where he collected a large number of scientific or historical digressions that he evidently saw as potentially disruptive of the book’s narrative. In this case, see *HGM*, 1:489–93.

106. Not that the white race progressed uniformly at every stage and in every place. Even in the most advanced musical countries of Europe, Fétis observed that musical talents and tastes would vary considerably among the populations. Fétis noted that the English were particularly “barbaric” when it came to questions of musical judgement and ability. But even the Italians, the most gifted and natural musicians in Europe, displayed mixed abilities based on his observations in Naples (Littlejohn, “Fétis’s Theory of Harmony in Nineteenth-Century Europe,” 312–17).

107. On Gall and the reception of phrenology in France, see Staum, *Labeling People*, 23–84. Of the twenty-seven parts of the brain that Gall identified as locations for particular



capacities, one devoted to music was located in the left rear. For more on phrenology and its influence on music pedagogy of the day, see Trippett, “Exercising Musical Minds.”

108. Thoré, *Dictionnaire de phrénologie et de physiognomonie*, 225. Note how the location of the organ for “tonality” is now moved forward just about the left eyebrow.

109. *RM* 7, no. 46 (December 14, 1833): 369–70, and *RM* 9, no. 23 (June 7, 1835): 177–79.

110. Sachs, *Wellsprings of Music*, 47.

111. See the touching conclusion to his section in the *Histoire* on the music of the Hebrews: *HGM*, 1:475–76. On Fétis’s close friendship (and later collaboration) with Meyerbeer, see Campos, *François-Joseph Fétis*, 427–45.

112. On the tragic history of Belgium’s colonial exploitation and genocide in Central Africa, see the sobering study of Adam Hochschild: *King Leopold’s Ghosts*. While the raping of the Congo’s commodities and subjugation of the Congolese peoples by Belgian colonialists took place largely after Fétis’s death, there is surely no dispute that the racial views on which such exploitation was justified were nurtured in earlier generations—even in disciplines seemingly as far removed as musicology.

113. Tiersot, *Musiques pittoresques*, 116.

#### CHAPTER SIX

1. Kieseewetter, *Die Musik der Araber*, 72; translation (with modification) from Bohلمان, “R.G. Kieseewetter’s *Die Musik der Araber*,” 184–85.

2. Salvador-Daniel, *Music and Musical Instruments of the Arab*, 45. This was also the opinion of the music critic Johann Weber. For Weber, the fractional intervals that Fétis heard in Arabic and Indian music were simply small inflections made by performers that rarely exceeded a comma and differed not a whit from the enharmonic subtleties that violinists and singers in the West regularly employed; *RGM* (December 14, 1879): 402; (January 25, 1880): 28.

3. La Fage, *Histoire générale de la musique et de la danse*, 419.

4. Fétis found La Fage’s conclusion as contradictory to the other evidence he had cribbed from Amiot (*HGM*, 1:58n2). It seems Fétis writing in 1869 had forgotten one of the diatonic examples he had quoted in his *Résumé* of 1835 (example 5.4, p. 169). Also recall Berlioz’s observation about the diatonic basis of Chinese music (p. 311n100).

5. Fauser, *Musical Encounters*, 146.

6. Tiersot, *Notes d’ethnographie musicale*, 113.

7. All subsequent citations of the *Esquisse* will be to Arlin’s translation unless otherwise noted.

8. For a more detailed history of the *Esquisse*, see Arlin’s helpful introduction to her translation *Esquisse*, ix–xxii.

9. *Esquisse*, xlv. Such a reader would have been Coussemaker, to whom Fétis sent a copy along with a warm letter soliciting his reaction (*Esquisse*, ix). Obviously Fétis had yet to entangle himself with his younger colleague in acrimonious polemics. Coussemaker’s monograph of 1852, the *Histoire de l’harmonie au moyen âge*, can partly be seen as a response to Fétis’s work.

10. *Esquisse*, ix. We might note, however, that there are numerous passages in the writings of Choron where he discussed music theorists from the eighteenth century—

a number of them Italian or German. At one point, Choron even mused about writing something more substantial on the history of this science (Meidhof, *Alexandre Étienne Chorons Akkordlehre*, 165n539).

11. Though it was hardly the first time Fétis had turned his sights on issues of historical music theory; he had pioneered scholarship on this topic in a number of essays published in his journals. More significantly, perhaps, many of the entries in his *Biographie universelle* were of music theorists. Never before had this fraternity of musical thinkers and pedagogues enjoyed equal billing along with composers and performers in such a public forum.

12. It is not quite correct to call this fourth book a mere revision of the *Esquisse*, as there were many new arguments and material added here as well as even more material from the first essay that was omitted. Fétis was also more systematic in his analysis and criticism of historical music theories in this latter publication. For that reason, I will henceforth cite the ordering and arguments of the *Traité* and when it is helpful, make reference to the text of the original *Esquisse*.

13. In the original *Esquisse*, Fétis had distinguished six differing means by which theorists had historically tried to ground their harmonic theories: (1) acoustical resonance, (2) the arithmetic series, (3) the triple progression, (4) the division of the monochord based on the arithmetic progression, (5) the arbitrary construction of chords by thirds, and (6) the arbitrary placement of chords on diatonic scale degrees (*Esquisse*, 154–55). Fétis essentially collapses together numbers 1 and 3 along with 5 and 6 to arrive at the present four-part enumeration. For yet another possible division of harmonic theory, although it is one he never completed, see the outline in “*Traité théorique et critique des éléments de la musique*,” sketched out in the 1850s, and transcribed in Wangermée, *François-Joseph Fétis: Musicologue et compositeur*, 312.

14. While Fétis only devotes a single paragraph to Tartini, he offers a far more comprehensive critique in the original *Esquisse* (84–94), though his conclusion is hardly more charitable. The Italian theorists principle of the “*terzo suono*” and his many deductions from geometrical diagrams represent “one of the most remarkable examples of the human mind’s lack of consistency” (*Esquisse*, 84; translation slightly modified).

15. Blein, *Exposé de quelques principes nouveaux sur l’acoustique*. Blein proved to be a prolific writer and went on to publish a number of additional monographs and articles on the topic, including *Principes de mélodie et d’harmonie déduits de la théorie des vibrations*.

16. *RM* 6, no. 16 (May 19, 1832): 125–28.

17. We met up with Eugène Troupenas in chapter 1 when he accompanied Fétis to some lectures of Wronski on the idealist philosophy of Kant and Hegel (see p. 14). While initially one of those theorists who opposed Fétis and who attempted to find a secure, mathematical basis for explaining music, Troupenas was soon convinced by Fétis to abandon this quixotic quest and instead to recognize the metaphysical basis of tonality. From that point on, Troupenas became one of Fétis’s most valued bulldogs whom he could entrust with refuting many of his critics.

18. Hence we find similar polemics regarding the use of vibrating plates and bells to generate harmony with amateur theorists such as the historian and philosopher Pierre-Hyacinthe Azaïs (numerous articles in the *RM* over the course of 1831 and 1832), F. C. Bus-

set [several letters in the *RGM* from 1838 and three highly vituperative pamphlets against Fétis], and Alexis Azeudeo (series of articles in *RGM* and *La France Musicale* written over the course of 1844).

19. Helmholtz, *Die Lehre von den Tonempfindungen als physiologische Grundlage für die Theorie der Musik*. I will be citing the standard English translation by Alexander J. Ellis, *On the Sensations of Tone as a Physiological Basis for the Theory of Music*.

20. Helmholtz, *On the Sensations of Tone*, 235.

21. It would include consideration of the writings of Charles Meerens, F. A. Renaud, Alexandre Marchand, Rudolphe Radau, Adolphe Ganot, August Lauquel, and Gustave Bertrand.

22. There is no entry for Helmholtz in the second edition of the *Biographie universelle*. It's too bad, as there is much in Helmholtz that might have been congenial to Fétis. Not least, he offered an intriguing explanation for the attractive force of the leading tone as the most "distantly related" of scale tones to the tonic and thereby exerting the strongest need for resolution (*On the Sensations of Tone*, 285). Similarly, Helmholtz's theory for the evolution of musical scales from simple pentatonic structures through ever more complex diatonic and chromatic forms might have given Fétis new ideas about the earliest forms of tonality that he was trying to reconstruct in the first volumes of his *Histoire*.

23. *RGM* 20, no.37 (September 11, 1853). His *Traité*, for example, was quickly translated after its first publication into English, Italian, and Spanish. But it never received a German translation, despite his repeated efforts.

24. Levens, *Abrégé des règles de l'harmonie pour apprendre la composition*.

25. *Traité*, 217–27; *Treatise*, 213–22. Fétis is not always clear how he is defining the arithmetic progression. He initially defines the series as the reciprocal of the harmonic series, hence, as multiples of string lengths as opposed to successive subdivisions of the string (see ex. 6.2). But later on, he calls the natural "horn" series arithmetic even though it produces the same notes as the harmonic divisions of the monochord string, possibly because one may measure the horn series by counting frequencies instead of string divisions. At one point, he causes further confusion by speaking of the "harmonic series of the horn and the trumpet, which coincides with the arithmetic progression"; *Esquisse*, 158.

26. Here as elsewhere in this fourth book, Fétis offers only a highly selective—and in a few cases, quite misleading—reading of the theorists whose works he criticizes. This is probably to be expected given how quickly he attempts to move through a vast amount of material. Still, no reader should rely on many of his thumbnail critiques of any of this literature without verifying his arguments. As just one example, he deplores the treatise of a certain Jamard published in 1769 (*Recherches sur la théorie de la musique*) because of the author's blind "mania" for a discredited system of harmony based on the arithmetic progression (*Esquisse*, 100). And it is true that Jamard mentions this arithmetic progression and the resulting minor scale it can generate (he calls it the "Echelle contr-harmonique," *Recherches*, 85). But Jamard goes on to say that it is really useless to musicians on the basis of its "rough and offensive tones" (94). Like Baillièrre before him (*Théorie de la musique*), Jamard advocated exclusively for scales derived from a single, "natural" harmonic series produced by such instruments as a hunting horn and its attendant natural seventh. Fétis's criticism, then, completely misses its target.

27. See Holtmeier, *Rameaus lange Schatten*, 217–29. In his book, Holtmeier offers a substantial and detailed discussion of Sorge's harmonic theory. Not unlike Fétis, Holtmeier hails it as "epochal" in the history of harmonic theory and one that "is insufficiently recognized by historians" (181).

28. Meidhof, *Alexandre Étienne Chorons Akkordlehre*, 152–81.

29. For more on Fétis's harmonic theory as presented in the *Traité*, the reader may consult the introduction to Landey's translation, *Treatise*, xv–xxix. For an even more detailed exposition, see Kosar, "François-Joseph Fétis' Theory of Chromaticism and Early Nineteenth Century Music," 75–194.

30. Attentive readers may recall from chapter 1 that in his early *Méthode* of 1823, Fétis only included prolongations and substitutions as the primary modifications of natural harmonies. He evidently decided at some point that chromatic alteration (introduced first by Rameau and then taken up by Choron) should also be added to this list of canonical operations.

31. Rameau had called this process "borrowed" (*empruntez*) in the *Traité* and used it to account for the diminished seventh chord on the leading tone, whereby  $\hat{5}$  of the dominant seventh is exchanged for a  $b\hat{6}$  (Rameau, *Traité*, 43). For a more detailed explanation of Rameau's arguments, see Christensen, *Rameau and Musical Thought*, 100.

32. Again, Fétis proves to be ungenerous to his predecessors. As we will shortly see, both Choron and Catel had offered quite similar explanations in their writings on harmony.

33. All of these techniques are explained and illustrated in book 2 of Fétis's *Traité*.

34. *Esquisse*, 122. Kirnberger was merely following Rameau here in seeing the motion  $ii^7-V$  as an imitation of the authentic cadence ( $V^7-I$ ), as both occur over a falling fifth in the fundamental bass. But Kirnberger also allowed the  $ii^7$  to resolve—as Fétis explains it—to the  $vii^6$ , in which case the seventh is "accidental" and thus a product of suspension. This is a good point to mention that Kirnberger was far more important to Fétis's theory than he lets on. Kirnberger was clear that harmonies could be varied by means such as suspension as well as alteration and substitution.

35. *Esquisse*, 151–52 (translation slightly modified). This is actually quite unfair to Choron, who (as Nathalie Meidhof has convincingly demonstrated) developed many of the ideas Fétis would teach in his harmony treatises, including his three fundamental mechanisms of chordal elaboration ("prolongation," "substitution," and "alteration") along with distinctions between dissonance chords that need to be prepared (as those by suspension) and those that may be sounded without preparation (Meidhof, *Alexandre Étienne Chorons Akkordlehre*, 78 ff.). It is interesting to note that Fétis considerably softened (and shortened) his criticism of Choron four years later in the *Traité*. While he still noted the many shifts in Choron's opinions over differing publications, he gently ended his critique by lamenting Choron's unfortunate turn to the harmonic theory of Marpurg in his last writings (*Traité*, 211).

36. For an authoritative study of this pedagogical tradition, see Sanguinetti, *Art of Partimento*; and van Tour, *Counterpoint and Partimento*.

37. Though we should not forget that his *Méthode* from 1823 (and reprinted in 1839) contained an appendix of graded partimenti exercises for the student to practice.

38. *RM* 3 (July 1829): 601–6. "Sur un passage singulier d'un quatour de Mozart."

39. The unsigned retort is found in the *Allgemeine musikalische Zeitung* but was probably penned by Peter Lichtenthal. No doubt the most consequential response to the whole affair was the far more extensive and fascinating analysis of K. 465 by Gottfried Weber in the third edition of his *Versuch einer geordneten Theorie der Tonsetzkunst* (1832). For an overview of the whole controversy, see Vertrees, “Mozart’s String Quartet K. 465: The History of a Controversy.”

40. *Traité*, 49; *Treatise*, 50. Saint-Saëns, upon reading Fétis’s assessment of Beethoven’s “error,” could only shake his head in wonder, noting sardonically “Scholars sometimes entertain strange ideas.” *L’écho de Paris* (December 10, 1911); reprinted in Saint-Saëns, *Écrits sur la musique et les musiciens*, 759.

41. *Traité*, 124; *Treatise*, 121. For more on the stormy reception of Fétis’s criticisms—and corrections—of Beethoven and Mozart, see the extensive discussion in Campos, *François-Joseph Fétis*, 289–321. Campos offers there a surprisingly sympathetic account of Fétis’s reasoning, arguing that it was not so much the case of narrow-minded musical pedantry as advocacy for “auditory civility” and common sense (310). Peter Bloom came to somewhat of a similar conclusion in his earlier article, “Critical Reaction to Beethoven in France: François-Joseph Fétis.” Fétis’s corrections, Bloom feels, are not so much meant as alterations to be included in all subsequent editions and performances as they are pedagogical “demonstrations” (80).

42. Berlioz, *Memoirs*, 217. For a full telling of this eventful story along with a broader history of the stormy relationship between Fétis and Berlioz, see Bloom, “Berlioz and the Critic: La damnation de Fétis.” On the Beethoven controversy, see 244–47.

43. Seyfried, *Ludwig van Beethoven’s Studien im Generalbasse, Contrapuncte und in der Compositions-Lehre*.

44. Seyfried, *Études de Beethoven*.

45. Nottebohm, “Generalbass und Kompositionslehre,” 203.

46. In his entry on Beethoven in his *Biographie universelle*, Fétis makes oblique reference to this treatise: “At another part of his life [Beethoven] had energetically defended the teachings of these [false] textbooks, and his studies are full of expressions of confidence in their rules” (*BU*<sup>1</sup>, 2:112).

47. A full exposition about Fétis’s fraught work as editor and critic of Beethoven is found in Campos, *François-Joseph Fétis*, 277–321.

48. Catel, *Traité de l’harmonie*. Various editions of this treatise (many with augmentations and supplements) continued to be published up to 1874.

49. Fétis oddly calls it “an inverse arithmetic progression” (*Traité*, 244, *Treatise*, 242).

50. Catel, *Traité de l’harmonie*, 61.

51. Once again, Fétis was not very charitable toward a predecessor from whom he actually borrowed a great deal, even as much of it was filtered through the work of Choron (Meidhof, *Alexandre Étienne Chorons Akkordlehre*, 157–84).

52. *BU*<sup>2</sup>, 3:78–79. For more on Fétis’s views of Catel, see the interesting appendix to his *Traité* (255–68; *Treatise*, 254–70), in which Fétis responds to a number of criticisms by Zimmerman, who was a student and staunch defender of Catel.

53. Christensen, *Rameau and Musical Thought*, 178.

54. Rameau, *Nouveau système*, 11.

55. Rameau invokes “octave identity” to reduce the compounded twelfths to simple perfect fifths.

56. *Génération harmonique*, 43. Here we should note that since Rameau is measuring string lengths with his calculations, the ascending progression must use a harmonic fifth ( $\frac{3}{2}$ ) while the descending progression uses an arithmetic fifth ( $\frac{2}{3}$ ). Rameau elsewhere calculates a full cycle of arithmetic fifths to the thirteenth term, 531441 (B $\sharp$ ), which differs from the compounded octave of C by a Pythagorean comma:  $(\frac{3}{2})^{12} / (\frac{2}{3})^7 = 531441/524288$ , or approximately 23.46 cents, roughly a quarter of a semitone (*Génération harmonique*, plate 3). In his *Nouveau système*, Rameau actually carried out this multiplication to the twenty-ninth term, a C quadruple sharp! (See the “Table des progressions,” 24.)

57. For a fuller discussion of Rameau’s trials and tribulations with the triple geometric progression and his various harmonization of the diatonic scale, see Christensen, *Rameau and Musical Thought*, 178–99.

58. Rameau relates this marvelous tale in his essay “Nouvelles réflexions sur le principe sonore,” appended to the *Code de musique pratique*, 225–27.

59. Roussier, *Traité des accords*, xxvii.

60. Roussier, *Mémoire sur la musique des anciens*.

61. Roussier, 76. See the explanation in Godwin, *Music and the Occult*, 32–33.

62. Roussier actually consulted with the musicologist Jean-Benjamin La Borde and the builder Jacques Germain about constructing an “enharmonic” harpsichord that could play these twenty-one notes of the full geometric progression. As Albert Cohen documented, a design for the instrument was submitted in 1782 to the Académie royale des sciences for their approbation, though we have no evidence the instrument was actually ever built (Cohen, *Music in the French Royal Academy of Sciences*, 53). La Borde, by the way, also discusses the triple progression in his own short essay, *Mémoire sur les proportions musicales*.

63. Roussier, *Mémoire sur la musique des anciens*, 33.

64. Fétis, *La musique mise à la portée de tout le monde*, 44. Fétis offers a slightly more sympathetic assessment of the “poor Abbé,” whose works were so mocked by his contemporaries in *BU*<sup>1</sup>, 7:499–501.

65. Fétis, *Esquisse de l’histoire de l’harmonie*, 105.

66. The brave reader is referred to Godwin’s summary, *Music and the Occult*, 49–73. D’Olivet’s main texts on music (mostly derived from a series of articles published posthumously in *La France musicale*) have been translated by Godwin, who also provides an introduction to this most enigmatic writer: “Music Explained as Science and Art and Considered in Its Analogical Relations to Religious Mysteries, Ancient Mythology and the History of the World.”

67. While the triple progression of fifths does not figure in the writings of all of these occultists, it is certainly a dominating presence in many of their writings and dogmas, linking as it does the hermetic wisdom of the Orient with that of ancient Egypt and Greece. For the reader interested on a tour of this marvelous literature, there is the book of Godwin previously cited (*Music and the Occult*). For a more general overview of occultism in nineteenth-century France, see Monroe, *Laboratories of Faith*.

68. Camille Durutte, “Première lettre à M. Fétis père,” *RGM* 20, no. 14 (April 3, 1853):

125. These examples are discussed further in Anne-Emmanuelle Ceulemans, “Fétis, la naissance de la tonalité moderne et la réception de ses idées au XIX<sup>e</sup> siècle.” Fétis, I should mention, responded brusquely to Durutte in the next issue of the *RGM* (20, no. 15 [April 10, 1853]: 133–34). Not surprisingly, he rejected Durutte’s examples as having “no relation to the novelties” introduced by Monteverdi nor having the least impact on the history of music by fundamentally changing the way musicians would henceforth hear and compose music. Durutte answered Fétis’s retort (*RGM* 20, no. 18 [May 1, 1853]: 161–64). But Fétis would have nothing more to say on the matter.

69. Henry, *H. Wronski et l'esthétique musicale*.

70. Fortunately, there is some helpful secondary literature that has done the work for us. One might begin with a chapter by Godwin, *Music and the Occult*, 99–109. Some of the technicalities of Wronski’s theory as transmitted by Durutte are explained in Fichet, *Les théories scientifiques*, 35–60.

71. Durutte, *Résumé élémentaire de la technie harmonique*, 17.

72. Durutte, *Réponse*.

73. The entire affair is reported in salacious detail by Schlesinger in the *RGM* (9, no. 9 [March 3, 1844]: 78).

74. *RGM* 25, no. 17 (April 28, 1858): 147–50.

75. Barbereau, *Traité théorique et pratique de composition musicale*.

76. Barbereau, *Études sur l'origine du système musical*.

77. At the end of his treatise, Barbereau mentions that he is preparing a second volume in which he will analyze the “musical systems of the Arabs, Hindus, and Greeks” and compare them to the modern European system (*Traité théorique et pratique de composition musicale*, cxxxv). But as Fétis chided, Barbereau was always promising more than he delivered. The volume never appeared. In Paris there is an unpublished manuscript in Barbereau’s hand on the theory of harmony and melody that may date from around this time and constitute parts of these planned sections (F-BN ms. mus. 8321–22).

78. *RGM* 20, nos. 4 and 7 (1853), with a response by Durutte in no. 8 and a rejoinder by Fétis in nos. 8, 9, and 11. This exchange would be followed several issues later by Durutte’s letter to Fétis on Gesualdo cited in note 68, above.

79. Delezenne’s writings are almost exclusively published in the *Mémoires* of the Lille Academy of Science. For a listing of articles related to music, see *BU*<sup>2</sup>, 2:458. A summary of these writings can be found in Meerens, *Hommage à la mémoire de M. Delezenne*.

80. D’Indy, *Cours de composition musicale*, 1:105, where he reifies the “ladder of fifths” as the fundamental “genesis” of the scale.

81. Gevaert, *Traité de l'harmonie théorique et pratique*, 5.

82. Lalo, *Esquisse d'une esthétique musicale scientifique*, 39–44.

83. D’Indy, *Cours de composition musicale*, 1:102–3.

84. Yassar, *Theory of Evolving Tonality*. Also see Gauldin, “Cycle-7 Complex,” for a more formalized version of Yassar’s theory.

#### CHAPTER SEVEN

1. See chapter 1, pp. 22–23.

2. He first introduced the concept—and terms—publically in his lectures of 1832. Spe-

cifically, it was in the seventh and eighth lectures on July 14 and 21 as reported in *RM* 6, 24–25. Of course, as with so much in Fétis's theory, it turns out he may well have been thinking of these categories long before. Elsewhere (and later) he claimed that as far back as 1816 he had thought of the concept of "omnitonic" music (*BU*<sup>1</sup>, 4:112–13).

3. On Vico's three ages of man and the fascinating role musical song plays in his historiography, see Tomlinson, "Vico's Songs," 344–377. On Enlightenment historiography and theories of progress in general, see the classical study by Nisbet, *History of the Idea of Progress*.

4. Comte's theory can be found most fully developed in his *Cours de philosophie positive*, which began publication in 1830.

5. D'Ortigue: *Palingénésie musicale*. Given his later devotion to religious music that we have surveyed in earlier chapters, one wonders whether d'Ortigue had second thoughts about his tripartition of Western music.

6. Knittel, "Imitation, Individuality, and Illness," 19.

7. D'Indy, *Cours de composition musicale*, 1:211–18.

8. Combarieu, *La musique, ses lois, son évolution*. On Combarieu's project, see Allen, *Philosophies of Music History*, 187–89.

9. Sérieyx, *Les trois états de la tonalité*.

10. Sérieyx, 20.

11. Allen's *Philosophies of Music History* is still a valuable study of these many attempts to divide and classify stages of music history. On "triune" theories of music history in the Romantic era, see especially pages 91–97, 228–45, and 263–67.

12. On the organicist roots of these tripartite divisions of music history, see in particular Webster, "Concept of Beethoven's 'Early' Period."

13. Bent, *Music Analysis in the Nineteenth Century*, 1:305.

14. *BU*<sup>1</sup>, 2:110; translated in Bent, 1:313.

15. *BU*<sup>1</sup>, 2:109; Bent, 1:313.

16. Bent, 1: 314.

17. Ulibishev was another later writer who also was influenced by Fétis's writings on Beethoven and proposed an analogous tripartite division of Beethoven's creative work in 1857. Fétis made a reference to Ulibishev's speculations about Beethoven's sanity in his late years in the second edition of the *Biographie universelle* (*BU*<sup>2</sup>, 1:312) without, however, fully endorsing it (see Bent, *Music Analysis in the Nineteenth Century*, 1:315n47). A translation of excerpts from Ulibishev's essay is found in Bent, 1:328–29.

18. We should note, though, that in other places, Fétis offered a far more generous assessment of Beethoven's late style. For example, in his edition of Beethoven's piano sonatas published in 1833, Fétis extolled the last sonatas as masterworks that had overcome all obstacles such that the many qualities of the works far outweigh any remaining deficiencies (*Œuvres choisies de Beethoven précédés d'une analyse raisonnée de ses ouvrages de piano*). The opus 106 is singled out for particular praise as a sonata in which a wealth of motivic ideas are brilliantly developed, confirming the richness of the composer's imagination and genius (1:3).

19. This was also noted by d'Ortigue, who wrote, "The unitonic order relates only to a system of tonality in which plainchant is the basis; it has no affinity with the other orders, which are only gradual and almost insensible transformations of a system that is based



on modern tonality. In a word, the first of these four orders forms a separate whole that is linked to one system; the three others form an equally separate whole that is linked to an opposing system"; *La maîtrise* (July 15, 1858): 58.

20. The description of pluritonic enharmony, particular in the use of the diminished seventh chord and the augmented sixth chord, is one that is strikingly close to Gottfried Weber's concept of *Mehrdeutigkeit* (often translated as "multiple meaning"). Fétis probably knew of Weber's ideas, as he wrote about Weber's theory treatise in both his *Esquisse* as well as in his entry on Weber for the *Biographie universelle*. The two writers also became involved in a polemic regarding the "wrong notes" in Mozart's Dissonance Quartet. (It was Fétis's article on this quartet that actually inspired Weber to add his famous appendix to the third edition of his *Versuch einer geordneten Theorie der Tonsetzkunst* in 1832 titled "On a particularly remarkable passage in a string quartet in C by Mozart.") But nowhere—either in the course of his exchange with Weber or in any of his later writings—did Fétis acknowledge or critique Weber's unique take on enharmony. For a background to this polemic and a translation of Weber's analysis, see Bent, *Music Analysis in the Nineteenth Century*, 1:157–83.

21. Here we should note that this description for omnitonic writing was not quite the same as one he gave in his 1832 lectures. There Fétis described two additional ways that a composer could weaken tonal identity by multiplying tendencies of differing notes beyond that of chromatic alteration. These are (1) a long unison bridging two keys and (2) a melodic line with affinities to more than one key (*RM* 6, no. 25 [July 21, 1832]: 197). He cites Beethoven and Haydn as two composers who enacted these kinds of techniques in their music. Evidently in his later writings, Fétis tightened up and "radicalized" his criteria for the omnitonic order.

22. *RM* 6, no. 25 [July 21, 1832]: 198. In mixing elements of the "unitonic" order with those of modern tonality, I don't think Fétis is contradicting his early insistence that the two tonalities are separate and incompatible. The idea here, as I read it, is more a nod toward Cousin's eclecticism, in which unitonic music offers modern composers inviting raw material for adaptation (perhaps "acclimatization"?). But there would not be a doubt that it is borrowed material placed in the ecology of modern tonality.

23. *Traité*, 195–96; *Treatise*, 190 (translation modified).

24. Although in a review of Beethoven's Choral Symphony, Fétis does offer some tart criticisms concerning the work's harmonic ineptitude and perverse modulatory practice (*RGM* 14 [June 6, 1847]: 187). A more explicit linking of Beethoven's late style with the omnitonic order was made by d'Ortigue: "The last works of Beethoven are therefore, in our opinion, the first in which this tendency of musical art emerges from the limits of the pluritonic order to enter the almost limitless field of the omnitonic order"; *La revue française* (December 15, 1837): 56. In the same article, d'Ortigue went on to name Berlioz as the composer who most aggressively developed a distinct style of omnitonic writing.

25. Saint-Saëns, *Écrits sur la musique et les musiciens*, 997.

26. The example is found in the *Traité*, 197–98. There Fétis provides a simple diatonic accompaniment to the melody followed by a second reharmonization that employs non-modulating figurations and chromatic embellishments.

27. For a study that offers a number of nineteenth-century excerpts that (in the

author's view) display omnitonic tendencies, see Kosar, "François-Joseph Fétis' Theory of Chromaticism and Early Nineteenth Century Music," 494–525.

28. Móricz, "Ambivalent Connection between Theory and Practice," 401.

29. Móricz, 415.

30. See the following issues of *RGM*: January 8, April 30, May 14, and May 21, 1837. For a translation of the most important letters in this exchange, see Hall-Swadely, *Collected Writings of Franz Liszt*, vol. 2, "Essays and Letters of a Traveling Bachelor of Music," 177–99. Also see the assessment in Ellis, *Music Criticism in Nineteenth-Century France*, 149–52.

31. In a series of articles published in *RGM* in 1852, Fétis outlined a theory of rhythmic evolution that was patterned on his theory of harmonic tonality. (Fétis had actually alluded to this already in his series of 1832 lectures, where Liszt must have first learned of it.) Unlike the advanced state of tonal composition, however, Fétis claimed that the rhythms used by composers in his day were still stuck in the first "unirhythmic" stage. His projection for the future "transirhythmic" and "plurirhythmic" stages were purely hypothetical, though he believed they would lie in the increased use of shifting beats, irregular phrasings, rhythmic displacements, and rapid metrical changes. But he refrained from speculating what the final "omnirhythmic" stage might look like. (For an analysis of Fétis's theory of rhythm, see Arlin, "Metric Mutation and Modulation.") Fétis's hastily sketched articles on his rhythmic orders strike me as a superficial and unconvincing analogue to his tonal theory. While the notion that rhythm might evolve along with tonality has a certain plausible ring to it, his mapping of the rhythmic orders on the four (or three) tonal orders seems overly forced and ultimately lacking the latter's empirical and historical grounding.

32. Cited in Berry, "Meaning(s) of 'Without,'" 258. A propos, Saint-Saëns spoke wonderingly of the Prelude to the Faust Symphony as a work "written in an unknown tonality, even though nothing offends the ear and it would be impossible to change a single note." Quoted in Nichols, *Camille Saint-Saëns on Music and Musicians*, 99.

33. *Correspondance*, 162n1.

34. *Correspondance*, #42-13 (November 19, 1842), 177. See also the letter of Fétis to Liszt in which Fétis describes the four orders of tonality. Omnitonic music, he there notes, seems to have returned music full circle from its diatonic maturity back to its origins found in the microtonal scales of the Arabs and Indians: *Correspondance*, #50-5 (March 18, 1850), 275.

35. This and other similar album leaves are described and transcribed in Kaczmarczyk, *Vingt-Quatre Grandes Études und andere Werke*, 162–64.

36. "You are the only one who would be able to grasp the true character of my talent and to unfold it from the surge of contradictory opinions. If you would be so kind as to honor me by undertaking this task, you would be able to ascertain—after a close examination of my decade-long work at Weimar—that I have not ceased to profit from your teaching, especially those of your notable lectures on the *omnitonique*." Quoted in Berry, "Meaning(s) of 'Without,'" 258. The letter was dated September 17, 1859, and is included in *Correspondance*, #59-23, 431.

37. Arthur Friedheim, a piano student of Liszt who became his personal secretary, wrote of seeing this manuscript among Liszt's papers at Weimar: "In his later years the Master had formed the habit of rising at five o'clock in the morning, and I paid him

many a solitary visit at that hour, even playing to him occasionally. Jokingly, he would inquire whether I was still up, or already up. On the last of these nocturnal visits I found him pouring over books and old manuscripts. With his permission I joined him in this very interesting occupation. Catching sight of one manuscript which particularly drew my attention, I picked it up saying: 'This will make you responsible for a lot of nonsense which is bound to be written someday.' I expected a rebuke for my remark, but he answered very seriously: 'That may be. I have not published it because the time for it is not yet ripe.' The title of this little book was 'Sketches for a Harmony of the Future.' Quoted in Friedheim, *Life of Liszt*, 161.

38. Both Berry and Móricz note that Liszt's compositions here seem more closely aligned to the theories of Carl Weitzmann, who in the 1850s sketched out a remarkably original analysis of the augmented triad and the diminished seventh chord as compositional resources; Berry, "Meaning(s) of 'Without,'" 249–53; Móricz, "Ambivalent Connection between Theory and Practice," 420. Tellingly, Weitzmann's essay on the diminished seventh chord was dedicated to Liszt. See Weitzmann, *Der übermässige Dreiklang* and *Der verminderte Septimenakkord*.

39. For a differing analytic reading of this piece as well as a detailed contextualization of the work's enigmatic title, see Berry, "Meaning(s) of 'Without.'"

40. Forte, "Liszt's Experimental Idiom."

41. Another promising analytic perspective for this music is that of "dissonant prolongations," where structures such as the augmented triad or diminished seventh chord serve as prolongational substitutes (in a Schenkerian sense) for the traditional consonant triad. Such an analysis is found in Robert Morgan's oft-cited article, "Dissonant Prolongations."

42. Josephson, "François-Joseph Fétis and Richard Wagner," 87.

43. *BU*<sup>2</sup>, 8:401.

44. *RGM* 19, no. 23 (June 6, 1852): 185–87; and continuing over six subsequent issues. On Fétis's arguments against Wagner's "music of the future," see Ellis, *Music Criticism in Nineteenth-Century France*, 206–11.

45. Fauser, "Cette musique sans tradition." See also Ellis, "Wagnerism and Anti-Wagnerism."

46. For an imaginative reading of Parsifal's aria in the second act of Wagner's opera that uncannily mimics a "grande attaque hystérique" described by Jean-Martin Chareot in 1879, see Hyer, "Parsifal Hystérique." Hyer convincingly shows how Wagner is able to convey in both drama and music the four stages of Chareot's diagnosis of hysteria.

47. *Le ménestrel* (March 17, 1861).

48. Taruskin, *Oxford History of Music*, 4:5.

49. Pagnerre, *Origines et variations de notre tonalité*. F. Renard voiced a similar view in his *Le principe radical de la musique et la tonalité moderne*.

50. Loquin, *L'harmonie rendue claire et mise à la portée de tous les musiciens*, 393.

51. See also his *Essai philosophique sur les principes constitutifs de la tonalité moderne* and *De l'avenir des théories musicales*.

52. Vineé, *Essai d'un système général de musique (étude sur la tonalité)*.

53. For example, one voice pedagogue toward the end of the century wrote some practical solfège manuals to teach singers how to sound in tune the enharmonic notes of

omnisonic music: Lemoine, *Tableau omnisonique où la théorie et la pratique de l'intonation sont rendues sensibles aux yeux*; and *Enseignement par l'aspect*. One other practical manifestation: the instrument inventor, Charles-Joseph Sax, invented a valved horn that could play the complete chromatic scale and named it the *cor omnisonique*. Fétis offered qualified praise for Sax's invention in a review from 1833: "Nouveau cor omnisonique," *RM* 13 (1833): 172–174.

54. Blainville, *Essai sur un troisième mode*.

55. In his musical dictionary, Rousseau advised that "Rather than bringing our music to plain-chant, I am persuaded that one would profit more by transporting plain-chant into our music" (s.v. "Plain-Chant." *Dictionnaire de musique*, 375).

56. Biamonte, "Modes in the Music of Beethoven, Schumann, and Brahms" offers a helpful overview.

57. Not that the application of eighteenth-century topic theory to the nineteenth century is unproblematic. For a thoughtful assessment of this issue, see Julian Horton, "Listening to Topics in the Nineteenth Century."

58. The literature on Liszt's late engagement with religious composition is huge. For an essay that emphasizes the importance of Fétis to Liszt's religious music, see Keym, "Franz Liszt und die Ästhetik der französischen Gregorianik-Renaissance," 99–112.

59. Ellis, *Politics of Plainchant in Fin-de-Siècle France*, xviii. For a more general history of the Niedermeyer School and its historical influence in France, see Galerne, *L'Ecole Niedermeyer*.

60. Van Wye, "Gregorian Influences in French Organ Music before the *Motu proprio*."

61. Something that had earlier been recommended by Tiron, *Études sur la musique grecque*.

62. Gonnard, *La musique modale en France de Berlioz à Debussy*. An older but still valuable survey of harmonic practice among French composers at the turn of the last century is found in Charles Koechlin, "Évolution de l'harmonie: période contemporaine depuis Bizet et César Franck jusqu'à nos jours," in Lavignac and De la Laurencie, *Encyclopédie de la musique et dictionnaire du conservatoire*, pt. 2, 591–760. In his exhaustive empirical analysis of musical excerpts from (mostly) French composers, Koechlin repeatedly notes the presence of "tonalités grégoriennes" and various "exotic" scales undergirding the many harmonic innovations of his immediate predecessors. (Koechlin wrote his entry in 1923.)

63. Kidd, "Louis Niedermeyer's System for Gregorian Chant Accompaniment."

64. Laloy, "Le Chant grégorien et la musique française," 80.

65. On French musicians' persistent attraction to the Middle Ages at the end of the century, see Ellis, *Interpreting the Musical Past*, 81–116. On the politics of French anti-Wagnerism, see Pasler, *Composing the Citizen*, 507–20.

66. An exhaustive inventory of topics that could be evoked by pentatonicism, along with ample musical examples, is found in Jeremy Day-O'Connell, *Pentatonicism from the Eighteenth Century to Debussy*. In the inventory of over four hundred pentatonic excerpts collected by Day-O'Connell from the nineteenth and early twentieth centuries, French composers stand in the clear majority.

67. Taruskin, *Oxford History of Music*, 4:59–129 (see esp. 66–69).

68. See the classic study by Locke, "Cutthroats and Casbah Dancers."

69. Locke, "Constructing the Oriental 'Other,'" 50. Also see Bartoli, "L'orientalisme dans la musique française du XIX<sup>e</sup> siècle."

70. Quoted in Faure, *Musique et société, du second empire aux années vingt*, 242.

71. On Liszt's use of the Gypsy scale, see Bárdos, "Die Volksmusikalischen Tonleitern bei Liszt." Also see Loya, *Liszt's Transcultural Modernism and the Hungarian Gypsy Tradition*.

72. If, however, the augmented seconds occur between scale degrees  $b\hat{2}$  and  $\hat{3}$  and between  $b\hat{6}$  and  $\hat{7}$ , the scale conveyed to French listeners a more "oriental" quality as comprising two disjunct tetrachords. In addition to Jean-Pierre Bartoli's article cited earlier, see Gut, "L'échelle a doublé seconde augmentée."

73. On Liszt's use of these scales in his music, see Bartoli, "Liszt and French Exoticism in Music," and Locke, "Constructing the Oriental 'Other,'" 261–302.

74. Quoted in Faure, *Musique et société, du second empire aux années vingt*, 252.

75. Louis Pagnerre, whom we earlier heard from promoting Wagner's music as the ideal of omnitonic music, was one who thought that the microtones of Indian and Arabic music might also offer resources for an omnitonic future (*Origines et variations de notre tonalité*, 135). But he finally concluded that this would be unlikely as long as musicians continued their reliance on (and subservience to) the pianoforte and its infernal equal temperament (139–40).

76. Perhaps the most sustained analysis of octatonicism as an analytic/compositional device is found in Van den Toorn, *Music of Igor Stravinsky*.

77. On the Russian origins of octatonicism, see Taruskin, *Stravinsky and the Russian Traditions*, 1:255–306. For his more recent reflections on the history (and historiography) of octatonicism, see "Catching Up with Rimsky-Korsakov."

78. I am indebted for the following paragraphs to the work of Sylvia Kahan, "'Rien de la tonalité usuelle,'" who has uncovered this story.

79. Kahan, 115.

#### EPILOGUE

1. B-Bc, Arc 008, fol. 265 ("à 4:00 de l'après-midi, Mort de Fétis").

2. Cited in Littlejohn, *Fétis's Theory of Harmony in Nineteenth-Century Europe*, 3 (translation slightly modified). Gevaert seems to have exaggerated the story slightly. According to the registers of the conservatory, the last concert Fétis conducted actually took place two weeks before his death, on March 12.

3. *HGM*, 5:372.

4. Reyer, *Notes de musique*, 403.

5. Aubry, *La musicologie médiévale*, 58–59.

6. Tiersot, *Notes d'ethnographie musicale*, 106.

7. See the classic essay by Erich Moritz von Hornbostel, "Melodie und Skala," originally published in 1912 and reprinted in Hornbostel, *Tonart und Ethos*, 59–75.

8. Shirlaw, *Theory of Harmony*, 351. Lucien Chevaillier had much the same complaint about Fétis's theory: "Les théories harmoniques," in Lavignac and De la Laurencie, *Encyclopédie de la Musique et dictionnaire du conservatoire*, pt. 2, 587.

9. Quoted and translated in Berry, "Meaning(s) of "Without,'" 258.
10. Gevaert, *Discours prononcé à l'occasion du centième anniversaire de la naissance de F. J. Fétis*.
11. Tiersot, *Notes d'ethnographie musicale*, 57.
12. Campos, *François-Joseph Fétis*, 617. In his appendix, Campos lists some fifty separate publications of which Fétis was either the author or the editor (763–67). To these we must remember the thousands upon thousands of pages that he published in an array of periodicals over a half-century.
13. Huron, *Sweet Anticipation: Music and the Psychology of Expectation*.
14. Rings, *Tonality and Transformation*, 104–5.
15. Tymoczko, *Geometry of Music*.
16. "Mon testament musical," *RGM* 20, no. 42 (October 16, 1853): 364–65.
17. There was actually a good deal of Hegelian teleology to be found in many accounts of biological evolution in the nineteenth century, including those by Darwin himself. See Robert Richards, "Impact of German Romanticism on Biology in the 19th Century."
18. Hegel, *Philosophy of Right*, 20.



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### ABBREVIATIONS

CHWMT	<i>Cambridge History of Western Music Theory</i>
JAMS	<i>Journal of the American Musicological Society</i>
JMT	<i>Journal of Music Theory</i>
RBM	<i>Revue belge de Musicologie</i>
RGM	<i>La revue et gazette musicale de Paris</i>
RM	<i>Revue musicale</i>
RMRPC	<i>Revue de la musique religieuse, populaire et classique</i>

### WORKS BY FÉTIS

- Antoine Stradivari, luthier célèbre, connu sous le nom de Stradivarius; précédé de recherches historiques et critiques sur l'origine et les transformations des instruments à archet et suivi d'analyses théoriques sur l'archet et sur François Tourte, auteur de ses derniers perfectionnements.* Paris: Vuillaume, 1856. Translated (with the permission of the author) by John Bishop as *Notice of Anthony Stradivari, the celebrated violin-maker, known by the name of Stradivarius: preceded by historical and critical researches on the origin and transformations of bow instruments; and followed by a theoretical analysis of the bow, and remarks on Francis Tourte, the author of its final improvements.* (London: R. Cocks, 1864). [Anthony Stradivari]
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